House of Commons
Science and Technology Committee

The Forensic Science Service

Seventh Report of Session 2010–12

Volume I: Report, together with formal minutes, oral and written evidence

Additional written evidence is contained in Volume II, available on the Committee website at www.parliament.uk/science

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The Science and Technology Committee

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Contacts
All correspondence should be addressed to the Clerk of the Science and Technology Committee, Committee Office, 7 Millbank, London SW1P 3JA. The telephone number for general inquiries is: 020 7219 2793; the Committee’s e-mail address is: scitechcom@parliament.uk
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The Forensic Science Service (FSS) is a Government-owned company. It provides services to police forces across England and Wales, together with other agencies such as the Crown Prosecution Service, British Transport Police and HM Revenue & Customs. Since the early 1990s, the FSS has gradually progressed from a public to a commercial organisation, and a market has developed in forensic services. The FSS competes with private forensic science providers and held around 60% market share in December 2010.

On 14 December 2010 the Government announced its intention to “support the wind-down of FSS, transferring or selling off as much of its operations as possible” by March 2012. The FSS’s operating losses and the projected shrinking forensics market were cited, and during our inquiry we were also informed about legal constraints surrounding the decision. Overall, we consider that the Government, in making its decision, did not give enough consideration to the impact on forensic science research and development (R&D), the capacity of private providers to absorb the FSS’s 60% market share and the wider implications for the criminal justice system. These considerations appear to have been overlooked in favour of the financial bottom line. In addition, we consider that the Home Office’s Chief Scientific Adviser’s satisfaction with his exclusion from the decision-making process and his failure to challenge the decision to be unacceptable.

The FSS’s dire financial position appears to have arisen from a complex combination of factors, principally the shrinking forensics market, driven by increasing police in-sourcing of forensic science services, and a forensic procurement framework that has driven down prices and does not adequately recognise the value of complex forensic services. The stabilisation of the forensics market is therefore now of crucial importance for all forensic science providers external to the police. We recommend that the Government introduce measures to ensure that the police do not further in-source forensic science services that are already available from external providers through the National Forensic Framework Agreement (NFFA). The current and previous Governments’ ambitions for a truly competitive market have been undermined by the police customer increasingly becoming the competitor.

It is an issue of great concern that many police laboratories are not accredited to the same quality standards as the FSS and private sector providers offering services through the NFFA. We are of the view that the transfer of work from the FSS to a non-accredited police or private laboratory would be highly undesirable, as it would pose significant and unacceptable risks to criminal justice. The role of the Forensic Science Regulator is vital and we urge the Government to bring forward proposals to provide him with statutory powers to enforce compliance with quality standards.

The FSS manages a large archive of case files, papers and retained materials. These are an important resource for the criminal justice system and we recommend that the archives, and the intellectual capability supporting them, remain as a single, accessible resource.

Forensic science R&D in the UK is not healthy, and we call on the Home Office and Research Councils to develop a new national research budget for forensic science.
While we consider that there could be merit in retaining the FSS as a public agency focusing on R&D, training, quality standards and the maintenance of forensic archives, we are not convinced that the separation of research and service provision would be the ideal outcome for the FSS.

Winding down the FSS will be a complex task and we are not confident that an orderly transition can be achieved by the extremely challenging deadline of March 2012. We recommend that the deadline should be extended by at least six months to enable the Government to consult on and determine a wider strategy for forensic science. The FSS should be supported during this period and the transition process must be carefully monitored to ensure that it does not further contribute to market instability or lead to a diminution of service to the criminal justice system. The primary consideration throughout must be the health of the criminal justice system.
1 Background

The inquiry

1. Forensic science is integral to the criminal justice system and often plays a key role in providing evidence throughout criminal proceedings. On 14 December 2010, the Home Office announced that the Government-owned Forensic Science Service (FSS), then delivering around 60% of forensic services to police forces in England and Wales, would be wound down. The statement, which we set out in full, outlined the Government’s decision and rationale:

The Forensic Science Service (FSS) was an executive agency which was granted trading fund status in 1999, a step designed to increase its financial flexibility. Then, following the McFarland Review in 2002, FSS Ltd was established as a GovCo, wholly owned by the government, in December 2005. The intention was that this be a transitional step towards a ‘public private partnership’.

In the event, however, no further progress was made. This lack of progress has led in our view to opportunities for reform being missed, and continuing reductions in the value of publicly owned assets.

The previous government did not reform the Forensic Science Service when it had the chance, and instead allowed it to maintain a cost base far higher than its commercial rivals. This meant that FSS continued operating uncompetitive terms and conditions and expanded its employment levels between 1999 and 2003. This was undertaken without bringing down the cost base towards a level where FSS would be able to compete.

Commercial rivals, many established by former FSS members of staff, have taken market share from the former state run monopoly.

FSS was set up as a GovCo, with an £18 million loan in December 2005. The company has met interest payments on this loan but cannot afford to repay the principal amount borrowed.

The previous government supported the company with a further £50 million grant from early 2009 to restructure the business.

Despite this intervention and the commitment of the current management team, the current challenging forensics market has put the FSS back into serious financial difficulty. FSS is currently making operating losses of around £2 million per month. Its cash is due to run out as early as January next year. It is vital that we take clear and decisive action to sort this out. The police have advised us that their spend on external forensic suppliers will continue to fall over the next few years, as forces seek to maximise efficiencies in this area. HMIC [Her Majesty’s Inspectorate of Constabulary] concur with this assessment.

We have therefore decided to support the wind-down of FSS, transferring or selling off as much of its operations as possible. We will work with FSS management and
staff, ACPO (Association of Chief Police Officers), and other suppliers to ensure an orderly transition, but our firm ambition is that there will be no continuing state interest in a forensics provider by March 2012.

There is no justification for the uncertainty and costs of trying to restructure and retain the business.

We will ensure the orderly wind-down of FSS does not impact on police service customers or the wider criminal justice system. With ACPO, we will put in place a central team to ensure work is transferred in a controlled way and that arrangement are put in place to ensure security of supply in future. The continued provision of effective forensics is our priority.

We know that there are real challenges ahead for FSS staff whose skills and contribution will be important as we move through the transition. We will be working hard with the company to ensure that staff are kept fully informed of developments.

We will also be working with ACPO to seek to maximise the level of competition in the market including through opportunities created by FSS leaving the field. This will help to ensure that police forces benefit from cost effective use of forensics.

We want to see the UK forensic science industry operating as a genuine market, with private sector providers competing to provide innovative services at the lowest cost. This will preserve police resources and maximise the positive impact forensic sciences can have on tackling crime. A competitive market can help to drive down prices and improve turnaround times, meaning serious crimes can be cleared up more quickly and efficiently. Ultimately, that is what everyone in the criminal justice system wants to see.¹

2. The decision was greeted with dismay by employees of the FSS, eminent forensic scientists from around the world² and some Members of Parliament.³ Therefore we decided to hold an inquiry into the proposed wind-down of the FSS and issued a call for evidence on 19 January 2010. The terms of reference asked:

a) What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

b) What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

c) What is the financial position of the Forensic Science Service?

d) What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic

¹ HC Deb, 14 December 2010, cols 94–96W5
² "Closure of forensic service puts justice at risk", The Times, Letters to the Editor, 28 December 2010
³ For example, Early Day Motion (2010-12) no. 1353, Future of the Forensic Science Service, tabled 26 January 2011, had 56 signatures as of 9 June 2011.
Science Service and the volume and nature of the forensic work carried out by police forces?

e) What are the alternatives to winding-down the Forensic Science Service?

f) So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

3. The Committee received around 100 written submissions.

4. We took oral evidence from five panels of witnesses over three evidence sessions. On 23 March we took evidence from FSS senior management and a trade union representing some of its staff: Bill Griffiths, Chairman, FSS; Dr Gill Tully, Research and Development Manager, FSS; and Steve Thomas, Officer for the FSS, Prospect Union.

5. On 30 March we took evidence from two panels of witnesses. The first included academics and private forensic science providers: Sir Alec Jeffreys, Professor of Genetics, University of Leicester; Professor Jim Fraser, Director, Centre for Forensic Science, Strathclyde University; David Hartshorne, Commercial Director, Orchid Cellmark Ltd; and David Richardson, Chief Executive, LGC Forensics. This was followed by a second panel from the policing and criminal justice sector, including: Roger Coe-Salazar, Chief Crown Prosecutor, Crown Prosecution Service; Gary Pugh, Director of Forensic Services, Metropolitan Police Service; Chief Constable Chris Sims, Association of Chief Police Officers; and Dr Simon Bramble, Head of Police Science and Forensics, National Policing Improvement Agency.

6. Last, we took evidence on 27 April, first from Professor Bernard Silverman, Chief Scientific Adviser, Home Office; and Andrew Rennison, Forensic Science Regulator, followed by a final panel with James Brokenshire MP, Parliamentary Under-Secretary of State for Crime Prevention, Home Office, and Dr Stephen Webb, Director of Finance and Strategy, Crime and Policing Group, Home Office.

7. We would like to thank those who provided written and oral evidence to this inquiry. In addition we extend our gratitude to the FSS and LGC Forensics for accommodating us on visits conducted as part of our inquiry. Our particular thanks are extended to the FSS employees who wrote to us and met with us during our visit to discuss issues that have clearly been a source of personal and professional distress.

8. The main body of our report is split into three main chapters: the forensics market, alternative forensic science providers (FSPs) and forensic science research and development (R&D). In the final chapter we bring together the various strands to make our final conclusions on the future of the FSS.

What is forensic science?

9. Broadly speaking, forensic science is science that is used for the purposes of the law4 or “that appertains to the courts”.5 Forensic science encompasses a range of disciplines, and

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4 Science and Technology Committee, Seventh Report of Session 2004–05, Forensic Science on Trial, HC 96–I, para 4
although forensic scientists typically analyse DNA, hair, fibres, footwear, firearms, drugs and human bodies, there are novel disciplines, such as the analysis of computer hard drives for material. In this inquiry we have not sought to define the scientific disciplines that constitute forensic science, instead focusing on the work of the FSS and its competitors.

10. When it has been ascertained that a crime or incident has occurred, evidence is recovered from the crime scene, suspects, witnesses and victims. Some or all of the evidence may be submitted, usually by the police, for forensic testing and analysis. The forensic scientist conducts tests and interprets the results. The forensic scientist prepares a witness statement and passes it to the police, who decide what further action to take, if any. If the case is taken to court, the witness statement is either read out or the forensic scientist appears as an expert witness in court. Forensic evidence can be used by the defence as well as the prosecution.

11. The Crown Prosecution Service, the Government Department responsible for prosecuting criminal cases investigated by the police in England and Wales, summarised the importance of forensic science:

Forensic science plays an important part in the investigation and prosecution of an increasing number of criminal offences. It is used from the very outset of an investigation at a crime scene through to the evidence relied upon in a criminal trial. Forensic evidence can be crucial in a wide range of cases ranging from the analysis of the blood of a motorist suspected of driving whilst under the influence of drink or drugs, through to serial murders and rapes. [...] Forensic evidence can bring huge benefits to the criminal justice system by narrowing the issues to be tried in a case or encouraging an early guilty plea.

12. Forensic evidence may also be used in other ways. In cold cases (crimes that are unsolved where the trail has gone “cold”), forensic evidence may be re-analysed, often years later using new forensic techniques, to provide a new lead. High profile case studies include the 2006 conviction of James Lloyd, the “shoe rapist”, for a series of rapes in the 1980s, using the FSS’s familial searching technique. Forensic evidence can also be used post-conviction to investigate potential miscarriages of justice. Such reviews are often enabled by the development of new analytical techniques.

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6 HC (2004–05) 96-I, para 4
7 HC (2004–05) 96-I, Table 2, p 11
9 Ev 99, paras 3–6
2 The forensics market

Forensic science provision in the UK

England and Wales

13. Forensic science provision in England and Wales has evolved since the 1980s when one provider, the Forensic Science Service (FSS) had a virtual monopoly, to the current situation with several private forensic science providers (FSPs). The changes were driven by the concept and emergence of a market in forensic science provision.

14. The FSS is a 100% Government-owned, contractor-operated (GovCo or GoCo) organisation. It provides services to police forces across England and Wales, together with other agencies such as the Crown Prosecution Service, the Serious Organised Crime Agency (SOCA), Ministry of Defence Police and Guarding Agency, British Transport Police and HM Revenue & Customs.\(^\text{11}\) The FSS works on more than 120,000 cases per year and employs around 1300 scientists.\(^\text{12}\) In addition, the FSS assists more than 60 countries worldwide with services including consultancy, training services, systems and databasing technology and casework. It helps overseas governments to establish or enhance forensic resources, particularly in the field of DNA technology,\(^\text{13}\) a field in which the FSS was an international pioneer.

15. There are several private forensic science providers (FSPs); the largest is LGC Forensics.

Scotland and Northern Ireland

16. Scotland and Northern Ireland have their own publicly-funded FSPs: the Scottish Police Services Authority (SPSA) Forensic Services and Forensic Science Northern Ireland (FSNI). We have not examined forensic science provision in Scotland and Northern Ireland as part of our inquiry.

\(^\text{12}\) Ev w165, para 1 [Royal Society of Chemistry]
Recent history of the FSS

17. The table below summarises the recent history of the FSS.

Table 1: Recent history of the Forensic Science Service

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<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>1999</td>
<td>The FSS gained Trading Fund status.</td>
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<td>2002</td>
<td>FSS stopped being the “preferred supplier” of forensic services for the Association of Chief Police Officers (ACPO).</td>
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<tr>
<td>2003</td>
<td>The Home Office’s Review of the FSS recommended the FSS become a Public-Private Partnership (PPP), via the Government-owned, contractor-operated (GovCo) model.</td>
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<tr>
<td>2005</td>
<td>FSS changed from a Trading Fund to a GovCo company.</td>
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<td>2008</td>
<td>With a £50 million Government grant, the FSS launched a transformation programme to reduce costs, aimed to deliver by mid 2011. This included the closure of three FSS sites: Chepstow in December 2010, Chorley and Priory House by March 2011.</td>
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<tr>
<td>2010</td>
<td>On 14 December, the Government announced closure of the FSS, stating “we have [...] decided to support the wind-down of FSS, transferring or selling off as much of its operations as possible. [...] our firm ambition is that there will be no continuing state interest in a forensics provider by March 2012.”</td>
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18. A key factor in the story of the FSS is the development of a market in forensic services. Prior to becoming an Executive Agency in 1991, the FSS did not charge customers for its services. Executive agencies enable executive functions within government to be carried out by a business unit focused on delivering specified outputs, within a framework of accountability to Ministers. The FSS gained Trading Fund status in 1999. As a trading fund, the FSS was still part of government and was set specific financial targets by HM Treasury. The change was intended to improve the FSS’s financial flexibility. In 2002 the FSS stopped being the “preferred supplier” of forensic services to police forces and multi-sourcing of forensic services was adopted by the FSS’s biggest customer, the...
Metropolitan Police, in 2003. These changes spurred the growth of private forensic science providers and the FSS gradually began to lose market share.

19. Against the background of the developing market in forensic science and the changing relationship between the police and the FSS, a review of the FSS was announced in July 2002 by the then Home Office Minister of State for Policing, John Denham MP. In 2003 the Home Office published the Review of the Forensic Science Service, which had been led by Robert McFarland, a consultant. The McFarland Review recommended that the FSS become a Public-Private Partnership (PPP), via the Government-owned, contractor-operated (GovCo) model. The Review considered that this would increase the FSS’s private sector flexibilities and relieve the Government of responsibility while allowing it to partly realise its investment. The GovCo phase was intended to enable a contract between the FSS as an embryonic PPP and Government to ensure continuity of services, quality, standards and prices, as well as identifying an appropriate private partner.

20. Reactions to the suggested move to a PPP model were mixed. In 2005 our predecessor Science and Technology Committee published Forensic Science on Trial, reporting on its inquiry into the McFarland Review’s recommendations. The Committee noted the “vehement opposition” from the trade unions and FSS staff, contrasted with the view from Forensic Alliance (now LGC Forensics) that the move to PPP was a “logical progression” that, according to the Association of Chief Police Officers (ACPO), would enable the FSS to have “access to the same market freedoms that other competitors enjoy”. The FSS itself welcomed the decision to move to PPP via a GovCo company and stated that “more freedoms than Trading Fund could offer were needed”. However, the Government appeared to send mixed messages on the FSS’s status change. Having announced its intention to develop the FSS as a PPP in July 2003, the Government then stated, in January 2005, that it would test the GovCo model in its own right, a move that the Committee considered to be inconsistent with the original acceptance of the McFarland Review in July 2003, which invoked GovCo only as a precursor to PPP. The Committee characterised the Government’s presentation of the decision as “misleading and confusing”. In fact our predecessor Committee was sceptical of the whole process and warned that “the Government’s poor track record at managing PPP projects does not inspire confidence in its ability to make a success of developing the FSS as a PPP”. Ultimately, however, the Committee concluded that “it should not be assumed that a GovCo is merely a transition step leading to a PPP and, if the FSS is successful as a GovCo, it should remain as such”.

20 Ev w152, para 12
21 HC (2004–05) 96–I para 19
23 As above.
24 HC (2004–05) 96–I, paras 27–28
25 HC (2004–05) 96–II, Ev 154
26 HC (2004–05) 96–I, para 41
27 As above.
28 HC (2004–05) 96–I, para 35
29 HC (2004–05) 96–I, para 47
In November 2005 the Committee held a follow-up evidence session with Andy Burnham MP, then Parliamentary Under-Secretary of State, Home Office, who stated:

no irrevocable decision has been taken with regard to any further development following PPP. It is my intention, and that of the Home Office, that the GovCo structure should be given an opportunity to succeed in its own right.30

21. The reasons for a lack of progress to PPP are explored further in paragraph 235, where we consider alternatives to the closure of the FSS. We assess, and express our criticisms of, the historical handling of the FSS, which includes the move to GovCo status, from paragraph 208.

22. The transition to PPP was never completed and the FSS remains a GovCo organisation. Prospect, representing around 1,000 FSS staff, referred to GovCo in its written submission to this inquiry as a “failed experiment”, and stated that the FSS’s poor financial position was “entirely a consequence of previous decisions to contract out an essential public service”.31

Forensic science for profit?

23. The concerns of FSS staff over the move to GovCo appeared to be based on an objection to the marketisation of forensic science services, a view that still prevails. Prospect stated that “it is simply not appropriate for the UK’s forensic science capability to be run on the basis of pure commercial disciplines”.32 Steve Thomas, Officer for the FSS, Prospect Union, stated that:

Prospect’s view was that embarking on this course was a dangerous one. In part [...] we were very concerned about commoditising forensic science and looking to secure a profit in a market that was not developed and in which there was only one main customer. [...] We were concerned that it would lead to our members working on profitable grounds, which would mean that work that was unprofitable would be marginalised. We believe that the concerns we expressed at the time have come to fruition, unfortunately.33

24. In the written submissions we received from FSS staff many considered that forensic science and the criminal justice system were unsuited to a market approach. For example, John Haley, FSS employee, considered that “there is no real [forensics] market in the UK” as “you cannot put a value on the criminal justice system”.34

25. We also heard the opposite view from other submissions. For example, Professor Jim Fraser, Director of the Centre for Forensic Science at the University of Strathclyde, noting the importance of effective regulation, stated that:

30 Science and Technology Committee, Oral evidence, Wednesday 23 November 2005, Forensic Science on Trial: follow-up, HC 685–i, Q 10
31 Ev 66–67, paras 12, 15
32 Ev 66, para 12
33 Q 11
34 Ev w11, para 10
I do not believe that one can legitimately object to privatisation in principle since private provision of services exists in many other areas of society, including the criminal justice system. Furthermore the main private forensic science providers appear to have served the needs of the CJS to date. There also appear to have been valuable benefits that have been forthcoming in England and Wales, such as very fast turnaround times for products and services. This contrasts with most public sector laboratories around the world that have very large backlogs.35

26. The Forensic Science Society feared that closure of the FSS would mean that “the less profitable areas of forensic science will be neglected”36 and Shailes Jagatiya, scientific area manager, FSS, stated that:

In-order to undertake this volume of work, some of which is not financially lucrative, it will almost certainly require some level of investment on the part of another [forensic science provider]. It is likely that a business case which delivers a promise of a financial return would be readily approved, however for other services where profits cannot be guaranteed it is unlikely that the board of any commercial organisation would be committed to investing. The commercial providers are not obliged to undertake all types of forensic analysis and many prefer to focus on the high value services.37

27. Andrea Grout, forensic scientist at the FSS, stated that:

The FSS has always proudly provided all types of forensic discipline, in order to best serve the CJS, whether profitable or not. Private sector providers have however carefully selected only profitable areas of forensic science, and left specialist, costly disciplines to the trusty supplier of last resort, the FSS. Inevitably, the FSS has therefore suffered financially where other private companies may seem to have succeeded. Clearly, overall forensic science is not a profitable or sustainable business arena. It is an essential service, requiring government support, in order to serve its sole function: to contribute toward a successful criminal justice system.38

28. The commoditisation of forensic science through the current procurement framework is explored further in paragraph 55.

29. At the time its closure was announced, the FSS held around 60% of market share in forensic science provision although its share of the market had been declining over many years. FSS market share varied across the country (for example in Wetherby, where the FSS worked with police forces primarily in the North-East, it was 90%)39 and by scientific

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35 Ev 105, para 5
36 Ev w163, para 4
37 Ev w142, para 4
38 Ev w7, para 9
39 Ev w80, para 14 [Gemma Escott, Elizabeth Harris, Nicola Taylor and Michelle Walton]
discipline (for example it had 75% of the forensic toxicology market). The next largest forensic provider was LGC Forensics, a private company with around 20% of the market.

**Police expenditure**

30. As well as providing services to police forces across England and Wales, the FSS provides services to other national law enforcement agencies too. However the police forces comprise the majority of the customer base for forensic science services and therefore the market for forensic testing is largely driven by police expenditure.

31. In September 2010 the report *Analysis of the Forensic Marketplace*, conducted by PricewaterhouseCoopers (PwC) for the National Policing Improvement Agency (NPIA), was produced. The report gave an indication of the current and future stability of the market, and subsequently the Government stated that a decline in the market from £170 million in 2009 to £110 million in 2015 was projected. The report has not been published to date, although the NPIA provided copies to us. It was clear from the announcement made on 14 December 2010 that the Home Office had sought information on the market from the police and PwC, as it had stated:

> The police have advised us that their spend on external forensic suppliers will continue to fall over the next few years, as forces seek to maximise efficiencies in this area. HMIC [Her Majesty’s Inspectorate of Constabulary] concur with this assessment.

Chief Constable Chris Sims, Association of Chief Police Officers (ACPO), clarified that:

> The discussion with ACPO was to get a view of the degree to which we thought the position was manageable should the FSS be brought to a conclusion.

> We provided a report through PwC about the stability of the market. It was the Home Office then, quite rightly, that made the decision. We were asked about how we would manage the consequences.

32. Given the importance that was attached to the future of the forensics market, we explored the issue further.

**A shrinking market**

33. Police expenditure on forensic science falls, broadly, into two categories: external and internal. The external expenditure is spent on procuring forensic services from external...
providers such as the FSS and private companies, and drives the external forensics market. Internal expenditure refers to spend on forensic science carried out in-house, that is, by the police themselves. Analyses of finger marks (fingerprinting), for example, have long been carried out in-house.

34. The NPIA, a non-departmental public body that supports policing, provided us with figures for police expenditure on forensics in England and Wales between 2005–06 and 2009–10, showing that while spend on in-house forensics had been increasing up to 2008–09, external spend decreased; a decrease in both had occurred in 2009–10.48

35. James Brokenshire MP, Parliamentary Under-Secretary of State for Crime Prevention, estimated that external spend was £138 million in 2010–11.49

Table 2: Police forensic expenditure in England and Wales50

<table>
<thead>
<tr>
<th>Year</th>
<th>Internal forensic spend £ Million (%)</th>
<th>External forensic spend £ Million (%)</th>
<th>Total £ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-6</td>
<td>165 (46.5%)</td>
<td>190 (53.5%)</td>
<td>355</td>
</tr>
<tr>
<td>2006-7</td>
<td>170 (47.2%)</td>
<td>190 (52.8%)</td>
<td>360</td>
</tr>
<tr>
<td>2007-8</td>
<td>180 (49.3%)</td>
<td>185 (50.7%)</td>
<td>365</td>
</tr>
<tr>
<td>2008-9</td>
<td>190 (52.1%)</td>
<td>175 (47.9%)</td>
<td>365</td>
</tr>
<tr>
<td>2009-10</td>
<td>185 (52.9%)</td>
<td>165 (47.1%)</td>
<td>350</td>
</tr>
<tr>
<td>2010-11</td>
<td>181 (56.4%)</td>
<td>138 (43.6%)</td>
<td>319</td>
</tr>
</tbody>
</table>

Figure 1: Police forensic expenditure in England and Wales

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48 Ev 106 [National Policing Improvement Agency]
49 Q 331; ACPO provided a slightly different figure of £140 million, see Ev 109.
50 Ev 107, Table 1 and Q 331
51 These figures do not include capital expenditure: this is explored from paragraph 45.
52 Ev 108 [ACPO]
53 Figure provided by the Minister, see Q 331.
36. The NPIA stated that “the reduction in the internal forensic spend will accelerate in 2010–11 and beyond”\textsuperscript{54} and stated that:

The internal expenditure is primarily on pay for crime scene and fingerprint analysis (work not carried out in the private sector). The external expenditure is split between commodity testing (DNA, Drugs and Toxicology) and casework [...] the casework is likely to include some DNA analysis depending on the type of case to be examined.\textsuperscript{55}

37. The state of the external forensics market has a strong influence on the willingness and potential for private FSPs to fill the gap left by the planned withdrawal of the FSS from the market. David Richardson, LGC Forensics, stated that:

It is important that [the] market has stability for the future if the private sector provision is going to continue to invest at the levels it is doing at the moment. [Police in sourcing of forensics work] is an important factor in the sustainability of that market.\textsuperscript{56}

38. The Minister’s view was that “when the commercial market is allowed to flourish properly and effectively, as we intend with the wind-down of the FSS, it will drive further efficiencies and underline the quality and assurance which can be obtained through the private market”.\textsuperscript{57} However, witnesses from FSS, LGC Forensics and Cellmark were not even confident about the current size of the market, with Bill Griffiths, Chairman of the FSS, estimating it at around £110 million.\textsuperscript{58} David Hartshorne, Cellmark, stated that:

We have seen a decline in the market. As we see it at the moment, the most important thing is having some level of certainty as to what the market size is likely to be. Clearly, there is an issue at the moment about the capacity that the FSS currently has and how that is going to be accommodated. We, and, I am sure, other private service providers, are poised in a position to be able to make investment, to be able to provide the sorts of additional capacity that is required. To make those investment decisions, we really need to have some understanding of where the market is likely to end up.\textsuperscript{59}

39. LGC Forensics and Cellmark were unaware of the figures we had received from the NPIA on police internal and external forensic expenditure, summarised in Table 2.\textsuperscript{60}

40. LGC Forensics stated in its written submission that it would be difficult “to attract further private sector investment in the market while there remains a perceived risk that one state subsidised market participant (the FSS) is being replaced by another (in the shape of in-sourced provision from police forces)”.\textsuperscript{61} Despite the concerns we heard from private

\textsuperscript{54} Ev 106
\textsuperscript{55} Ev 107
\textsuperscript{56} Q 82
\textsuperscript{57} Q 328
\textsuperscript{58} Qq 3 and 123
\textsuperscript{59} Q 124
\textsuperscript{60} Q 123
\textsuperscript{61} Ev 70, para 17
companies, when we asked the Minister whether he had heard concerns from the private sector about the police’s internal forensic expenditure, he responded “not as far as I am aware”. Witnesses from LGC Forensics and Cellmark confirmed, while giving oral evidence on 30 March, that they had not been consulted prior to the closure decision.

41. There was a widespread view that the forensics market was fragile and Mike Silverman, Reporting Officer, Metropolitan Police Forensic Science Laboratory, stated that:

This is only partly as a result of the FSS wind-down. Of more impact are the shrinking market, financial constraints on the only realistic customer for forensic science (the Police services) and the pressures to find cuts in forensic science police budgets (perhaps through in sourcing or unwarranted reduction in submissions to the laboratory). [...]

Although I am sure that any competent forensic service provider would be able to complete process upscaling in time to manage the volume of work currently being carried out by the FSS, I am at a loss as to why they would want to take such a risk. What is the commercial sense in the risk of an investment in additional staff and equipment and accommodation without any assurances from the Police customer that there will be a continued demand for the service?

42. Given that the Government expected private forensic science providers (FSPs) to pick up the FSS’s 60% share of the external forensics market, it is disappointing that the Government does not appear to have gathered any market intelligence on the capacity and commercial willingness of private forensic science providers to take on the FSS’s work.

43. The apparent lack of transparency over the size of the forensics market is unacceptable and we see no reason why the FSS and other forensic science providers should have been unaware of police forensic expenditure figures. The levels of police expenditure on internal and external forensics should have been published, and we recommend that they are published in detail in future. If the Government expects the private sector to pick up the FSS’s market share, it must be clear with private forensic science providers about the size of the market and anticipated future trends.

44. The Minister’s lack of awareness that private FSPs have concerns about police expenditure on forensic science is worrying. The Government must now ensure that the views of private FSPs are sufficiently taken into account during the transition period; it runs the risk otherwise of having unrealistic expectations about what private FSPs can deliver in a shrinking market.

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62 Q 329
63 Q 77
64 For example, Ev w139, para 4.0 [Mike Silverman]
65 Ev w139–140, paras 4.0–4.1
Full costs of police internal forensics

45. We have made clear our views on transparency of police expenditure. Therefore we were concerned when the hidden costs of police labs were questioned, for example by David Sawney, Principal Scientist, FSS, who stated in his written submission that “the bill for work done by external [providers] may well be reduced, but the cost of the inhouse work [the police] do is often hidden”.66 We took this issue up with Chief Constable Chris Sims, ACPO, and Dr Simon Bramble, Head of Police Science and Forensics, NPIA, but were unable to get to the bottom of the matter. It was eventually acknowledged that the figures provided to us by the NPIA (see Table 2) included training but did not include capital expenditure.67 Chief Constable Sims stated that capital spend would be “tiny”,68 although he could not give us any figures. We requested the information in writing and were told that:

Unfortunately it has not been possible to obtain capital expenditure specifically for forensics for the period requested [2005-2011] but we have been able to review such expenditure in West Midlands Police as a case example. Over the last three years there has been no capital expenditure in that force in the area of forensic science, following an earlier re-fit of the facility.69

Chief Constable Sims explained that “under government policy to reduce central demands for data on forces, we are constrained to use existing data sources rather than carry out new data gathering exercises”.70

46. When the issue was raised again on 17 May 2011 during a debate, Rt Hon Damian Green MP, Minister of State for Immigration, stated that:

The operational expenditure of individual police forces is a matter for chief constables. [...] it would be wrong for Home Office Ministers to try to detail every piece of expenditure by every police force in the country. By going down that route, we have over-managed police forces and other public services, to their detriment. [...] the police operational independence is an important way to improve the service.71

47. The Home Office sent us an additional written submission on 17 May, stating that:

The Home Office does not compile details of police expenditure as it is up to individual Police Authorities and Chief Constables to decide how best to spend their money.

For expenditure information we rely on CIPFA (the Chartered Institute of Public Finance and Accountancy) which compiles expenditure figures in its annual ‘Police Statistics’ publication. Although the ‘Police Statistics’ publication is quite detailed, it

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66 Ev w55, para 4.5
67 Qq 175–87
68 Q 186
69 Ev 108
70 As above.
71 HC Deb, 17 May 2011, col S7WH
does not go down to the level of detail the Committee were looking for on police capital expenditure on forensics laboratories. We have asked CIPFA why this is not included in their data. They explained that spending on forensics laboratories was a very niche area which meant there was little or no demand for the information to be collected. However, CIPFA did say that if the Committee did want the information to be collected in future, a request could be submitted to the CIPFA-led Working Group that agrees the data-collection questionnaire that goes out to forces.72

48. Given our desire to report on this inquiry as soon as possible, we did not have time to approach the CIPFA for the figures.

49. In our view, collecting data on police expenditure is not at odds with enabling the police to have operational independence. We are concerned that neither ACPO nor the Home Office could provide us with the full cost of internal forensic science activities. We recommend that ACPO and the Home Office gather and publish data on the full police expenditure on internal forensic activities, including capital, training and skills, forensic testing and administration over the last five years, and continue to publish this information in future. If the Government’s policy of a market in forensic science services is to operate effectively, it is important that the full costs of internal forensic expenditure are fully and accurately reported. In addition, we consider that the statement given to Parliament on 14 December 2010 was inadequate as the information on police expenditure, on which it was based, was incomplete.

Spending review 2010

50. The precise impacts on police forensic expenditure following the Spending Review 2010 are yet to be seen. The 2010 Spending Review, published on 20 October, announced a reduction in Home Office spending by 23 per cent in real terms by 2014/15 and a 20 per cent real terms cut to core police funding over the next four financial years.73 David Sawney, Principal Scientist, FSS, considered that “in the current economic climate where police budgets are being dramatically cut, the police as primary customer are seeking to reduce their spending on forensic science as much as possible”.74

51. When we asked the Minister whether, given the decrease in the external market of £27 million between 2009–10 and 2010–11 and reductions in police budgets, the market may reduce to £110 million significantly sooner than the projected date of 2015,75 he responded that:

It would be wrong to speculate around that. We can only work to the information that we have received from PwC and HMIC who looked at this at that point in time. Clearly, efficiency savings have been made by the police. The way in which they are

72 Ev 63
74 Ev w53, para 1.2
75 Based on the PWC report
procuring services is quite clear. I don’t necessarily see it in the way that you have characterised it.  

52. The figures provided in the PwC report, *Analysis of the Forensic Marketplace*, were produced in September 2010, before the 2010 Spending Review and the announcement of the decision to close the FSS. Given the marked decrease in the external forensics market in 2010–11, it is reasonable to expect that the market may shrink to £110 million or less before 2015, particularly given that spending cuts have yet to bite on police budgets. While we agree with the Minister that it would be wrong to speculate, we recommend that the Government re-evaluates the future of the forensics market in light of the cuts to police budgets and planned withdrawal of the FSS from the market.

**National Forensic Framework Agreement**

53. The means by which the police procure forensic science services also affect the forensics market. The National Forensic Procurement Project was established in 2007 to formulate a strategy for procurement of forensic analysis, leading to the development of the National Forensic Framework Agreement (NFFA). The NFFA is managed and supported by the NPIA. The NFFA is used by most of the police forces in England, although other qualifying agencies can use it too. Procurement under the NFFA is not compulsory, for example the North West and South West regions are not currently covered by the NFFA: they purchase forensic services collaboratively under the “North West South West consortium”.

54. Under the NFFA, 14 categories of “product” are identified and suitable forensic providers are identified for each product.

<table>
<thead>
<tr>
<th>Work Package</th>
<th>Forensic Service Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DNA PACE</td>
<td>Eurofins Genetic Services Ltd, Forensic Science Service Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd</td>
</tr>
<tr>
<td>2. DNA Crime Scene Stains</td>
<td>Eurofins Forensic Services, Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd</td>
</tr>
<tr>
<td>3. Drugs</td>
<td>Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Mass Spec Analytical Ltd, Scientifics Ltd</td>
</tr>
<tr>
<td>4. Fire Investigation</td>
<td>First Forensic Ltd, Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd</td>
</tr>
<tr>
<td>5. Footwear Marks</td>
<td>First Forensic Ltd, Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Napier Associates, Orchid Cellmark Ltd, Manlove Forensics Ltd</td>
</tr>
</tbody>
</table>

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76 Q 332


78 As above.

79 As above.

80 As above.
<table>
<thead>
<tr>
<th>Work Package</th>
<th>Forensic Service Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Casework - Gun Crime A</td>
<td>Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd, Manlove Forensics Ltd</td>
</tr>
<tr>
<td>8. Casework - Sexual Offences</td>
<td>Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd, Forensic Access Ltd</td>
</tr>
<tr>
<td>10. Questioned Documents</td>
<td>Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd</td>
</tr>
<tr>
<td>11. Road Traffic Incident/ Collision Investigation</td>
<td>Forensic Science Service Ltd, LGC Forensics Ltd</td>
</tr>
<tr>
<td>13. Casework - Gun Crime B</td>
<td>Forensic Science Service Ltd, Key Forensic Services Ltd, LGC Forensics Ltd, Orchid Cellmark Ltd</td>
</tr>
</tbody>
</table>

**Commoditisation**

55. Axiom International Limited, a company that assists overseas governments by providing forensic science and police training, explained the history of the current procurement strategy and its subsequent effect on the FSS:

[The growth of] police forensic budgets [...] prompted greater focus on value for money. This highlighted the difficulty of comparing one forensic supplier with another because they all described their services and calculated prices in different ways.

To overcome this and provide a greater degree of control, the police introduced a new procurement system for forensic science. This specified, through a series of ‘products’, the precise nature and level of service required, timescales for delivery, and quality and reporting standards to be met, with price the only real differentiator. Prices fell substantially which suited the police. But scientists were dismayed because they were left with little or no opportunity to use their skill and ingenuity to develop more effective investigative strategies than allowed by simple lists of ‘products’ chosen by their customers. There was also less money to be channelled into research and development—the life blood of any scientific enterprise.

Compounding the difficulties was an all or nothing approach to contracts, resulting in huge swings of work between unsuccessful and successful providers which started to have a seriously destabilising effect on the market. The first to bear the brunt of
these swings was the FSS because they had the largest share of the market, reflecting their historic monopoly.81

56. The NFFA’s drive towards commoditisation of forensic services into priced products was widely criticised by forensic scientists from the FSS, private companies and academics. The Northumbria University Centre for Forensic Science considered that the NFFA:

appears to have maximised commodification and disaggregation of supply (i.e. a number of different providers might handle different tests in a single investigation). Thus the lowest possible prices might be obtained at the expense of optimising value through the effective use of scientific expertise.82

57. Dr S P Day, FSS employee, considered the NFFA to be incompatible with the complexities of forensic interpretation:

Forensic Interpretation products are characterised by their reliance on expertise (not process), by their unpredictability, and their focus on solving a problem. Like CSI on television, every case is different. They are expensive because they require investment in an individual’s knowledge, scientific research, and innovation. [...] In the submissions where investigative skills are required the [NFFA] drives the wrong behaviour in [police] Scientific Support units. Cases where inadequate or insufficient samples have been submitted or where the strategy for the forensic investigation has been set based on cost or policy rather than effectiveness are common.

Because of the way the [NFFA] is constructed the forensic interpretation products often find themselves competing against forensic testing products. Getting a DNA profile does not necessarily solve a crime but is a lot cheaper than interpretation of how the DNA got there, which is the more important aspect of successfully solving a crime.83

Dr Day concluded that “forensic interpretation is a holistic service not a series of discrete products and the market should be re-constructed to trade services, not products” and that “there is a risk that some Forensic Interpretation disciplines will not be available to solve major crime in the future”.84

58. Axiom International too considered that the procurement system needed adjustment to reflect the complexities of forensic activities.85 Forensic Science Northern Ireland (FSNI) stated that “the ACPO-led procurement approach to date has been poorly conceived and is driving commoditisation and price reduction and reducing the value added services, thus suppressing providers’ profit margins”.86

81 Ev w148, paras 9–11
82 Ev w153, para 14
83 Ev w46, paras 14–16
84 Ev w46, paras 19–20
85 Ev w147
86 Ev w76, para 3.4
59. Others took a positive view of the procurement strategy. For example, David Hartshorne, Commercial Director, Cellmark, considered that:

The procurement exercise dictates some very good quality standards by which police forces and we need to be able to work. In that regard, you might argue that the procurement exercise is raising some of the quality standards in forensic science provision.\(^\text{87}\)

Mr Coe-Salazar, Crown Prosecution Service (CPS), considered that standardisation had improved quality and efficiency, and that “operationally from a prosecutor’s perspective, we have not noticed a difference in the sense of cases being taken to court and so forth”.\(^\text{88}\)

Dr Bramble, NPIA, stated that:

One of the other objectives with the framework was to spread the work across a number of private sector suppliers. We now have four organisations that are able to offer the majority of what the Police Service wants to procure, which adds additional competition. That is not to say that we are not continually looking for improvement. We recognise there are some frustrations [...] We are feeding those lessons in.\(^\text{89}\)

60. The NPIA emphasised that the NFFA, rather than police in-sourcing, was a more significant reason for the decline in external police spend on forensic science:

Although increased in-sourcing of forensic services is offered as a reason for the drop in external forensic spend, it is important to note the significance of the application of commercial tendering arrangements to forensic services making the service more effective [to] buyers.

The NPIA has developed a National Forensic Framework Agreement which allows forces to tender their forensic services in a relatively simple way [...] This is being adopted nationally.

The East Midlands region were the latest region to put their entire forensic services out to tender under the NFFA agreement. This has resulted in an 18% reduction in their total cost of external forensics and the cost of drug analysis dropped by 40%.

When savings of this magnitude are compared to the fall in the value of the forensic marketplace, it can be seen that the introduction of competition into the forensic process is the single biggest factor in the reduction in forces external forensic spend.\(^\text{90}\)

61. David Hartshorne, Commercial Director, Cellmark, considered that both the procurement strategy and police in-sourcing had influenced the market. He stated that:

[The market] has been influenced by a number of factors. One is that the procurement exercise that has been ongoing for a number of years has been driving down prices. So the amount of expenditure is affected as a result of that. We also see

\(^{87}\) Q 86
\(^{88}\) Q 158
\(^{89}\) As above.
\(^{90}\) Ev 107–108
that there is a restriction on expenditure as a result of public procurement and public expenditure restrictions at the moment. Overall, there has been a reduction. We are also seeing some in-house work provided by police forces, which, again, is restricting the amount of external expenditure.91

62. It is our understanding that some areas of forensic science provision, particularly complex, interpretive analyses, are not profitable under the current procurement strategy, although this does not make them less important to criminal justice. In considering the proposed closure of the FSS and development of a future procurement strategy, the Government must recognise and address this issue.

Fragmentation

63. Another criticism of the NFFA was that it encouraged fragmentation of forensic science provision, whereby exhibits from the same crime scene might be sent to different FSPs. Dr Gill Tully, Research and Development Manager, FSS, stated:

We have seen in recent years that the forensic procurement approach has been towards driving the work down to commodities and simple analytical tests, and potentially losing the wider, interpretive value. [...] forensic science is a puzzle and if you split up this process then you won’t see the whole picture. It is very much an issue of concern to all our caseworking scientists that, more and more, they are being directed very clearly just to examine small fragments of evidence in a case in an analytical way and they are not able to see the whole picture and put that together. We have already seen instances where that has led to problems with quality and problems in court.92

64. Forensic Service Northern Ireland (FSNI) stated that:

A [...] negative effect of commoditisation has been the “fragmentation” of casework as different exhibits from the same crime are dispersed to multiple providers based on the apparent cost of a particular piece of work or product. This greatly impedes the overall forensic interpretation and planning, introduces additional points of failure in continuity and contamination control and compromises the ability to optimise the recovery of multiple evidence types from the same exhibit (known as forensic integration). An example of this is a mobile phone first sent to a small provider whose expertise is in data recovery from the phone memory will have any potential for DNA, fingerprint and fibre evidence destroyed because the phone specialist provider does not have the facilities or expertise to examine and recover multiple evidence types in a contamination controlled environment.

Only a few forensic providers (FSS and FSNI amongst them) have the ability to integrate forensic examinations across a wide range of specialisms. Breaking up FSS will likely damage or destroy this rare capability.93

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91 Q 83
92 Q 32
93 Ev w74–75, paras 2.4–2.5
65. We put FSNI’s views to Dr Gary Pugh, Metropolitan Police Service, who responded that:

I have no experience of the fragmentation to which I think that refers in which individual cases are being fragmented so that different materials are sent to different providers. That is certainly not the case in the Metropolitan Police and I don’t know of any other force that operates forensic science in that way.94

66. When we put FSNI’s statement to Chief Constable Sims, he responded that “I disagree with virtually everything in that statement”, yet he also stated that “you could always have a highly specialised piece in a case that required it to go to a niche provider who was, in effect, the only provider. That has always been the case”.95

67. Continuity, also referred to as the chain of custody, refers to the movement and treatment of physical evidence from the crime scene, including removal, storage and processing. Fragmentation poses risks to continuity, which is vital to the acceptance of evidence in court. Roger Coe Salazar, CPS, highlighted the importance of continuity in criminal cases:

One of the very first questions that comes up in a criminal case around any form of exhibit is continuity. Has continuity been established? Can it be maintained? Is there integrity? It is called the golden thread—an umbilical cord that is running through the case.96

On the issue of fragmentation, he stated:

Does it naturally follow that fragmentation is a bad thing? It is how it is managed. The proof is in the pudding here. We prosecute over 1 million cases a year. There is a distinction [...] between specialisms as opposed to moving one particular article from one place to another, to another and to another. If, indeed, fragmentation is taking place, a risk is inherent in that and the risk is to do with continuity. But, if it is managed properly, then it is not a problem. It is like most things. On the face of it, operationally, from our perspective, if it is taking place, it is not creating an operational delivery problem.97

68. We consider that fragmentation, whether caused by exhibits from the same crime being sent to different FSPs or the transfer of articles from one to another, poses risks to continuity. While the CPS considered that such risks could be managed, there were mixed views on whether fragmentation actually occurs. The risks of fragmentation cannot be managed if the extent of fragmentation and the reasons for it are unknown. It is the responsibility of the police to monitor whether fragmentation, whereby crime exhibits from the same crime are sent to different FSPs, has been occurring. ACPO and the NPIA (or its successor) should conduct a survey of police forces to determine the extent to which fragmentation has occurred under the National Forensic Framework.

94 Q 163
95 As above.
96 Q 224
97 Q 164
The Forensic Science Service Agreement, and reasons for any fragmentation. This should be fed into future forensic procurement frameworks and continually monitored.

**The next procurement framework**

69. The NPIA will close by March 2012 and the NPIA is working with Home Office and ACPO to identify which services should be discontinued, and which services should transfer to successor agencies after 2012.\(^{98}\) When asked what would happen to the NPIA’s functions, Dr Bramble told us that:

> It is my understanding that the Home Office has requested that non-IT procurement returns to the Home Office as soon as is feasible. I believe that work is under way. That would suggest that the procurement element of the national framework, in terms of the skills and capabilities, will sit in the Home Office.

> [...] at the moment my understanding is that the NPIA will be phased out. At the general level, there are a number of reviews that we are waiting upon [...] These will help decision-making processes, which ultimately will decide where the functions that remain in the NPIA may end up. That is a process, according to my understanding, that is going to take most of this financial year, I suggest.\(^{99}\)

Chief Constable Sims added that:

> It is still very much up for discussion. Our understanding from ACPO’s point of view is that different parts of the NPIA will migrate to different homes. Some of it will, perhaps, go back to the Home Office, some of it, potentially, will be within the National Crime Agency that is being established, and some, potentially, within lead force arrangements within policing. As yet, the route map is not clear.\(^{100}\)

70. Dr Bramble stated that:

> part of the PWC report was to help us work out the next framework, because this framework comes to an end in 2012. We need to replace it. We want to take those lessons on board and try and find even better ways of procuring for both sides.\(^{101}\)

71. Chief Constable Sims told us that the procurement strategy had “driven down costs” and that “it has hugely and massively driven up quality, in terms of timeliness, standards and so on”\(^{102}\). However he acknowledged that it had “probably” contributed to market instability.\(^{103}\)

72. The expiration of the current procurement strategy provides an ideal opportunity for the NPIA, ACPO and the Home Office to review the successes and failures of the

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\(^{99}\) Q 162

\(^{100}\) As above.

\(^{101}\) Q 158

\(^{102}\) As above.

\(^{103}\) As above.
National Forensic Framework Agreement. We recommend that the following questions are answered and resolved: (i) whether all forensic services, particularly complex interpretations, are adequately valued; and (ii) whether the procurement strategy has encouraged fragmentation of casework.

**Financial position of the FSS**

73. Although the reasons put to us varied, there was no dispute over the fact that the FSS had been in a poor financial position. The FSS had been subject to Government-led interventions designed to improve its operation within the market, most recently a transformation/restructuring programme funded by a £50 million Government grant.

**The transformation programme**

74. The objectives of the FSS’s transformation programme were to:

- Align core operational business to the future customer requirement;
- Make the FSS a profitable and sustainable business within a “right sized operating platform”;
- Develop the FSS position as employer of choice; and
- Provide the best positioning and value for the shareholder and the UK criminal justice system within the marketplace.

By December 2010, three FSS sites were planned for closure and the FSS was “on course to have reduced its headcount by 608 from 1874 to 1266 by the end of the 10/11 financial year”.

75. Despite the £50 million grant for restructuring, of which £37.9 million was spent in 2009–10, the FSS’s sales revenue continued to decrease while losses increased.

<table>
<thead>
<tr>
<th>Year/£million</th>
<th>Sales revenue</th>
<th>Operating costs</th>
<th>Exceptional costs: restructuring (excluded from operating costs)</th>
<th>Profit/(loss) on ordinary activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>138.0</td>
<td>134.4</td>
<td>4.6</td>
<td>3.5</td>
</tr>
<tr>
<td>2008-09</td>
<td>125.8</td>
<td>131.0</td>
<td>12.3</td>
<td>(4.9)</td>
</tr>
<tr>
<td>2009-10</td>
<td>113.0</td>
<td>126.0</td>
<td>37.9</td>
<td>(12.7)</td>
</tr>
</tbody>
</table>

76. Bill Griffiths, FSS Chairman, explained that “the exceptional costs were the costs that were funding the reduction in staff and the efficiencies”, which “was not just headcount

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104 Ev 83 [Forensic Science Service]  
105 Ev 84 [Forensic Science Service]  
reduction [...] the purpose was to leave a business that was smaller and could still operate across the whole range of services that we had to provide”. Mr Griffiths stated that:

the benefit of [the restructuring] funds comes through later because the transformation is done, the cost base falls and the number of people falls. The idea was to bring the business back to a stable and more profitable basis. We should say that there was a headcount and a level of costs. We had to resize the business. We could not do it in a rash way. We did it carefully, and the transformation, which was necessary—I would, again, pay tribute to all involved, including the trade unions and the employees—was praised as being a success because it did get the business to a new basis.108

77. In their written submission, the FSS explained that the transformation programme, funded with a £50m government grant, “was on track to deliver the anticipated benefits by mid 2011” and that:

The losses of £2m per month quoted in the December 14th announcement do not reflect the prospective savings from the transformation programme. The first FSS site closed at the end of December 2010, as planned, with two further sites on track for closure in March 2011 in anticipation that FSS would lose market share as the commercial market developed.109

78. Mr Griffiths, FSS Chairman, told us that the loss for 2010-11 was expected to be £19 million. When asked whether this figure was the source for the Government’s quoted £2 million monthly losses, he replied:

I am prepared to agree that that is where they got it from, yes. There were months where we lost £2 million, literally. We think it is £19 million but that is not counting the benefits of transformation because we have only just closed some of the laboratories—in December and March—and so we are looking forward.110

79. The Government confirmed in a written answer on 31 January that:

The Forensic Science Service (FSS) operating losses of £2 million a month, which we referred to in our announcement on 14 December 2010, are current losses and therefore do not take into account any savings delivered through planned FSS site closures, nor do they take into account further likely declines in FSS’ business.111

80. The Government announcement that the FSS was losing £2 million a month was not the full story. It should have been made clear that (i) the figure did not take into account the savings expected to be delivered by the transformation programme; (ii) it did not account for potential further declines in business; and (iii) while some monthly losses may have been £2 million, the average monthly loss over the past year was lower.

107 Q 17
108 Q 19
109 Ev 78, paras 8–9
110 Q 25
111 HC Deb, 31 January 2011, cols 653–54W
As a result, evaluation of the proposal to close the FSS from the taxpayer’s perspective was difficult.

81. A significant number of FSS employees who wrote to us expressed surprise that the transformation programme had not been allowed to finish before the Government took a decision on the FSS’s future. Dr Fiona Perry, Forensic Toxicologist, FSS, pointed out that “the amount of money required [to support the FSS until the end of the transformation programme] is tiny compared to the billions used to bail out the banks and subsidise transport”.\(^{112}\) Amanda Meaby, Forensic Biologist, FSS, stated:

> The FSS was given the opportunity to re-shape in order to meet the increasing demands of the police customer yet maintain its high standards and this transformation programme had gone exceptionally well. Unfortunately, the Home Office announcement on 14th December halted the transformation programme and now we will never know the true benefits of this investment in staff and intelligent property.\(^{113}\)

82. A minority of FSS staff appeared to have less faith in the transformation programme, stating, for example, that “the transformation process which the FSS has been undergoing for the past two years [...] has not and will not result in a cost effective service”.\(^{114}\)

83. Ultimately, however, we heard that the transformation could not have been successful because of the shrinking forensics market. Mr Griffiths explained that since the change to GovCo in 2005, the market had not reformed as expected and that the FSS:

> raised these concerns and asked for a formal market review to be undertaken. We asked for that a number of times. We wanted to know what kind of a market it was and how big it was so that our plans could be formulated to address that. [...] the plan could only be as good as the assumptions we had made and we said that we would like those assumptions to be validated. We did not get any formal validation for the market. We wanted an external, broad, independent review. [...] We were unsighted, other than the trend of submissions that we got into the business.\(^{115}\)

Mr Griffiths explained that better information on the state of the market:

> would have shown following the transformation of our business [...] whether that would have been a stable platform to deal with the market changes or whether we would have to do other things, be it further restructuring or whatever. [...] the level of decline in this current year, from about the time we submitted the plan in April, has been very severe. It is of the order of 20% plus, and it was more severe in the second six months than the first six months. We had a very unstable situation throughout the period up to the decision.

\(^{112}\) Ev w28, para 5v
\(^{113}\) Ev w38, para 3
\(^{114}\) Ev w103, para 12 [Jeffrey Gray and Sara Gray]
\(^{115}\) Q 4
I don’t know what detailed information was available to the officials when they were preparing the case for the eventual announcement. We know some work was done by Pricewaterhouse. We did not see that until February, but, in itself, it may not have been the only piece of information that was available. I am not sighted on the whole lot.\(^\text{116}\)

84. Mr Griffiths stated that the transformation programme would “absolutely” have delivered the FSS back into the black had it not been for the market situation.\(^\text{117}\) He considered that the Government may not have been fully convinced because:

If you take the full evidence that they would have had at their disposal, and some of it is alluded to in their announcement, there is a worry about the size and the contraction of the market. That overwhelms, potentially, the benefits. We were trying to get a business that was smaller, stable and still able to operate across the full range of services, preserving all the skills and all the integrity. If the marketplace, the environment and, indeed, the appetite for police forces to in-source were going to carry on at a pace, then I can imagine that that would overwhelm even the success of transformation.

[...] If the appetite for in-sourcing is fulfilled—probably, more than half the police forces have some appetite for it—then you could imagine a market very much smaller than now. The transformation was not intended to resize the business for a very small market of £50 million, £60 million or £70 million.\(^\text{118}\)

85. The Minister explained why restructuring was ruled out as an option for resolving the FSS’s financial situation:

It is worth talking about some of the evidence and issues that we looked at in the context of forming our decision. One important part of that was an assessment of the size of the market and what was expected to happen in the future. The estimate that we received, in terms of the size of the existing external forensic market, was around the £170 million to £160 million range and that was projected to reduce to around £110 million by the end of 2015. We looked at that and at the fact that every time the FSS had gone out to the market as part of the procurement framework, it had lost business—every time that it had sought to go out to the competitive market and when police forces tendered for the work.

Seeking to examine the issue of a reducing market with the FSS having a declining share of that market, we could not satisfy ourselves that, by investing what would be a significant sum of money, that sum of money would, potentially, be smaller than the revenue that the FSS would be receiving in that reduced situation.\(^\text{119}\)

86. **We are dismayed that the FSS was not privy to information on the forensics market.** There has clearly been a persistent failure to communicate information to the FSS.

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\(^{116}\) Q 5

\(^{117}\) Qq 20–21

\(^{118}\) Q 23

\(^{119}\) Q 299
about the market environment in which it was expected to find a way to thrive. The PwC report on the state of the forensics marketplace and figures on police expenditure should have been available.

Conclusions

87. We have expressed our concerns at the decline in the external forensics market, which, although partly attributable to the savings brought about by procurement strategies, has also been influenced by the increased police in-sourcing of forensic science. The Minister attributed the FSS’s current situation to its inability to compete under the NFFA rather than in-sourcing:

The FSS’s challenges were that it was set up as a GovCo with the intent of establishing some sort of private-public partnership or moving to a fully commercialised basis. But it got stuck. It had an inherently high cost base attached to it which fettered its ability to compete when new contracts became available through the National Forensic Framework model and, consequently, continued to lose business every time a police force or a region came through seeking to procure its services. I would characterise that as being the weakness rather than issues on in-sourcing or the challenges around that. It was largely that the FSS was not, perhaps, in the right state and condition to be able to compete in an increasingly competitive market.\(^\text{120}\)

The Minister’s view did not quite agree with the Home Office’s written submission, which stated that the Government was “advised that neither ongoing nor further restructuring would solve the key underlying problem: reducing levels of customer demand”.\(^\text{121}\)

88. When asked whether the decline in the external market could be attributed to police in-sourcing, the Minister responded that:

The interrelationship between police-provided internal services as against police triage and assessment of their forensic need, whether that be external or internal, as well as the provision of services in the external market, is a complex position. There is a fair degree of complexity around this and I would not necessarily point to one issue being more significant than any other. There is a range of factors that all interrelate here. I would not necessarily place the greatest amount of weight on any one of those specific factors.\(^\text{122}\)

89. When we asked the Minister what influence the Home Office had over police expenditure, he replied that:

Clearly, we set the overall budgets for individual policing, but it is for individual police forces to make the determinations as to their need. Certainly from the Home

\(^\text{120}\) Q 321
\(^\text{121}\) Ev 62, para 28
\(^\text{122}\) Q 322
Office, we don’t see it as our role to micro-manage police spending in relation to the activities of the police.\footnote{Q 324}

90. The Minister also explained that the Government was “looking carefully at the issue of mandation” with respect to police in-sourcing and that:

We made the decision not to use mandation at this point in time, given the nature of the forensics transition work around the FSS, mandating, for example, that all police forces should go out to the National Forensic Framework Agreement. It is something that we will continue to keep under review, moving forward, in terms of the utilisation of mandation to see that police forces are harnessing moneys effectively in that context. It is in that mandation framework, which has been allowed and permitted on the way in which the police service procures certain contracts and services and facilities to itself, that that may arise […].\footnote{Q 325}

On mandation, the Government will decide whether to proceed with the services regulations that we have. The effective mandation could be, for example, that nothing bought in the market in the future by the police could be undertaken outside of the National Forensic Framework Agreement that is being delivered. That would prevent in-sourcing of anything bought in the market that is available through the National Framework. Regulations could be amended in the future, for example, to address successor frameworks when the current National Framework expires. It could be used in that way. It is something that we will continue to keep under examination. At this point in time, with the transition of the arrangements with the FSS—the transition that is taking place—now is, perhaps, not the time to be using that.\footnote{Q 326}

91. If the Government wants a competitive market in forensic services it must ensure that the market is not distorted by the police customer increasingly becoming the competitor. Otherwise the ambition for a truly competitive market is fundamentally undermined. We consider that the Government’s ambitions for fully privatised forensic science provision are jeopardised by its complacent attitude towards police forensic expenditure.

92. We are concerned that there are no measures in place to curb further in-sourcing. We recommend that the Government introduce measures to ensure that the police do not further in-source forensic science services that are already available from external providers through the National Forensic Framework Agreement. Regulations should apply to any successor frameworks. We disagree with the Minister that the FSS transition period may not be the right time to put these measures in place – given the fragility and uncertain future of the market it is the ideal time to do this.

\footnotesize{\begin{itemize}
  \item \footnotesize{Q 324}
  \item \footnotesize{Q 325}
  \item \footnotesize{Q 326}
\end{itemize}}
3 Private and police forensic science provision

93. A key part of our inquiry into the closure of the Forensic Science Service (FSS) was to examine the capabilities and suitability of alternative forensic science providers, now and in a post-FSS world. We looked at the two main alternatives: private forensic science providers (FSPs) and the police. In this chapter we have looked at forensic service provision to the police and criminal justice customers. Research and development issues are addressed in the next chapter.

Quality standards

94. The Crown Prosecution Service (CPS) explained the importance of standards in forensic science:

> It is [...] imperative that the highest possible standards are maintained by the suppliers of forensic services including proper resourcing, training, equipment, processes and integrity benchmarks such as accreditation. Unless these standards are followed, those guilty of crime may escape justice or innocent persons could be convicted.  

95. Quality standards in forensic science are ideally achieved through accreditation to the international standard ISO 17025 (General requirements for the competence of testing and calibration laboratories), which builds on the older ISO 9001 standard. The Forensic Science Regulator (FSR) is a public appointee whose function is to ensure that the provision of forensic science services across the criminal justice system is subject to an appropriate regime of scientific quality standards. The first and current FSR, Andrew Rennison, took up his post in February 2008. Mr Rennison explained that ISO 17025 assesses:

> a whole range of things, but these are the four cornerstones that are vital for me. First, that it assesses the organisational competence: “As an organisation, from the top level, do you take quality seriously? Does that filter down through? Do you build a good quality culture?” That is absolutely vital. We have missed a key point in the past by focusing on the individual scientist because a good scientist could work in a poor quality culture producing poor science.

Secondly, it assesses the competence of the individuals. It has been slightly weak in that area so we are bolstering that through the implementation of the Integrated Competency Framework developed by Skills for Justice, and the police and the commercial labs have bought into that.

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126 Ev 99, para 6
128 “Meet the Regulator”, Home Office website, www.homeoffice.gov.uk
Thirdly, it assesses, importantly, the validity of methods. It sets requirements around validity so when UKAS—the United Kingdom Accreditation Service—do their assessments they will want to see clear evidence that you have tested and validated your methods. In my codes of practice [...] we have expanded on that quite significantly because we think that validation has got to be well and truly pinned down.

Fourthly, it assesses objectivity and impartiality. The standard demands that the laboratory is autonomous and is able to deliver impartial and objective opinion evidence.¹²⁹

96. However, ISO 17025 does not guarantee quality, as Dr Gill Tully, Research and Development Manager at the FSS pointed out:

although ISO 17025 is necessary, it is not sufficient to ensure quality because it is very much a standard that is around laboratory testing. It does not really cover issues like setting the forensic strategy for a case, working out which items to examine and which not. It certainly does not cover the complex interpretation of the results and the presentation of the evidence in court. It is part of a wider framework that is not in place and is certainly not in place as a standard across all laboratories.¹³⁰

**Private forensic science providers**

97. All forensic work tendered under the National Forensic Framework Agreement (NFFA) must be accredited to ISO 17025.¹³¹ The Government explained in its written submission that:

The leading private sector forensic science laboratories on the procurement framework work to demanding quality standards and are accredited against ISO/IEC 17025 (General requirements for the competence of testing and calibration laboratories) by UKAS. Companies that are not accredited are expected to achieve accreditation if they undertake work for the police.¹³²

98. The scope of accreditation can vary across private FSPs. LGC Forensics, for example, told us that they were accredited “for 87 methods across 6 laboratories covering the full range of forensic disciplines. This extensive scope of accreditation is amongst the broadest in the world”.¹³³ On the other hand, the CPS stated that:

None of the suppliers are United Kingdom Accreditation Service (UKAS) ISO accredited in all forensic disciplines, and thus can only take on a limited range of forensic work. The suppliers would need to work towards accreditation in new disciplines to take on some of the current work carried out by the FSS. By way of example, the FSS are thought to be currently the only supplier offering a Crime Scene

¹²⁹ Q 276
¹³⁰ Q 63
¹³¹ Ev 73, para 2 [Cellmark Forensic Services]
¹³² Ev 61, para 17
¹³³ Ev 71, para 21
Investigator service as well as certain specialised drugs analyses. Gaining accreditation in these fields is a time consuming and potentially expensive process and the appetite of the suppliers to undertake this exercise is not yet known.134

99. The Natural History Museum highlighted the risks posed by smaller unaccredited FSPs taking on more forensic work:

the FSS has an extremely high quality of service and accreditation, for example, adherence to ISO standards. Some of the alternative forensic providers have similar high standards, but smaller providers might not be able to match those standards, especially if they try to take on the opened market in a poorly prepared state, and it is likely that overall standards would fall.135

100. In the transition period to 2012, the Government must ensure that none of the FSS’s work is transferred to a private forensic science provider that has not achieved accreditation to ISO 17025.

**Police forensic laboratories**

101. The concerns expressed over forensic science carried out by private companies, which are accredited for the services provided to police forces through the procurement framework, were mild compared to the almost unanimous alarm articulated over forensic science in unaccredited police laboratories. For example, Key Forensic Science Services considered that:

there is a low risk to impartiality or quality if forensic science continues to be delivered by high quality, accredited unbiased, impartial and independent forensic science providers.

The real risk is with police in-sourcing, i.e. carrying out forensic science activities for themselves in uncontrolled, non-accredited laboratories, which presents a very real risk to the quality of forensic analysis produced.136

Dr Steven Baker, a long serving employee of the FSS, stated:

Currently virtually no forensic work, and none of the limited forensic research done by police forces is accredited to recognised quality standards [...] Such forensic research within police forces is likely to be to a lower quality standard and this will take longer than March 2012 to rectify. This increases the risk of both miscarriages of justice and of forensic evidence being successfully challenged in the courts where the validity of scientific techniques is being ever more vigorously scrutinised.137

102. As already noted, all FSPs providing services for the police must be accredited to ISO 17025—this is a requirement under the current procurement strategy. However, police in-house forensic services are currently not subject to the same requirement. The paradox was

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134 Ev 100, para 15
135 Ev w29, para 9
136 Ev w72, paras 2.2–2.3
137 Ev w94, para 1.5
highlighted by several of those who provided written submissions—for example, the Forensic Science Northern Ireland (FSNI). The FSS highlighted the financial consequences of the disparity on their business:

FSS invests more than 15% of its cost base in maintaining an accredited quality system. Police labs and small FSPs not compliant with ISO17025 do not incur this cost and have a significant cost advantage in a market where price is the dominant factor in contract award.

The Forensics21 programme

103. In April 2008 the National Policing Improvement Agency (NPIA), in partnership with the Association of Chief Police Officers (ACPO), launched the Forensics21 programme, an overarching programme of work aimed at "creating a police-led forensic service". The programme completed Phase 1 in March 2010 and projects included the successful transition of the National DNA Database from the FSS to the NPIA and the development of a national footwear reference collection.

104. Mr Rennison, the Forensic Science Regulator (FSR), explained the requirements underpinning the Forensics21 programme’s ambitions for police laboratory accreditation:

In November 2009 the EU Council agreed a Framework Decision requiring all DNA and fingerprint laboratories (whether they be government, commercial or police laboratories) to be accredited against the ISO/IEC 17025 standard by 2013 and 2105 respectively. All the UK laboratories undertaking forensic DNA analysis for the police currently comply with this accreditation requirement. The initial focus for police forces is on their fingerprint enhancement laboratories in order to achieve compliance with the Framework Decision, some forces already wish to include wider laboratory functions.

105. There was some scepticism over the feasibility of the accreditation deadlines. For example, the FSS stated that “there is no clear commitment from all police forces to meet these standards given the associated costs” and Dr Kevin Sullivan, Standards and Validation Manager, FSS, stated that:

Progress towards accreditation of police science to ISO17025 has been variable and timelines are slipping significantly. To date virtually no police forensic science is conducted to this quality standard which is in stark contrast with traditional FSPs. The only force to date to achieve this is the Metropolitan Police for some of their scientific work [...] but this represents only a very small fraction of their total scientific activity. ACPO aim to rectify this situation and have stated that forensic science taken back in-house from FSPs should be accredited to ISO17025, but in

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138 Ev w75, para 3.2
139 Ev 80, para 34
141 As above.
142 Ev 75, para 8
143 Ev 80, para 32
reality budgetary and time constraints mean that only a small fraction of their science will be accredited by the FSS closure date and it will be a number of years before all police science could achieve ISO17025 accreditation [...] 

ACPO announced in Jan 2010 that a project had commenced within the NPIA- run Forensics 21 programme to implement quality standards for police forensic science. The aim was to achieve accreditation to ISO 17025 by March 2013 but just for the enhancement stage of fingerprint analysis. A year later the deadline has been extended by two and a half years to November 2015.144

106. Mr Rennison explained that in addition to the Metropolitan Police Service (MPS), which had been accredited to ISO17025 for an in-house trace evidence recovery laboratory:145

Greater Manchester police [GMP] now have a laboratory working to that standard for the examination of firearms. West Midlands police have a laboratory to that standard for the examination of firearms. Derbyshire police have a laboratory accredited for evidence recovery. I know of three other police forces going through the application process at the moment. The current situation in policing is that many police forces are actively looking at collaboration agreements in the provision of forensic science, which I think is exactly the right way forward. I am now very closely engaged with those collaboration projects where I can be. For example, I sit on the project board of East Midlands police. They actively want to pursue application for ISO 17025 for their combined laboratories. The same in the north-west is led by GMP in Cheshire—Cheshire have applied for accreditation for their laboratory—and the same in the Yorkshire forces as well, where they are combining.146

107. We had concerns about the Government’s intended deadline of 2012 for the wind-down of the FSS and the transfer of the FSS’s work to non-accredited environments, because of the risks to continuity in criminal cases. A transfer could potentially lead to the forensic evidence being challenged in court. We sought reassurances from the FSR and Minister that no such transfer would take place. The FSR told us that:

The most obvious risk to me in the closure of the FSS is the risk of taking work out of the FSS accredited environment. There is no doubt that the Forensic Science Service, since 1991, has led the world on the development of quality standards. They now have, by far, the broadest “scope of accreditation”, which is the number of methods they cover in their accreditation. There is a real risk of taking work out of that broad scope of accreditation into a non-accredited environment. The way I describe that risk is that, in the accredited environment, you manage the risk of quality failings. You don’t eliminate it. You manage it down to low risk. You can’t inoculate against failures but you can manage the risk very aggressively.

If we take it out of that accredited environment to a non-accredited environment, the risk of something going wrong, I think, rises to very high. In the current

144 Ev w108, paras 3.4.2 –3.4.3
145 Ev 75, para 6
146 Q 272
environment you have a low risk but the impact is always high. You can never manage that impact down. The impact of a quality failing will always remain high. If you then take that work into a non-accredited environment, the risk shoots to high but the impact becomes very high because you haven’t got a leg to stand on, quite simply. I have written to ACPO, the NPIA and to the Home Office making that risk very clear. The result of that is agreements that the work will be moved to similarly accredited environments.147

108. When asked whether he was confident that all of the FSS’s current work would be transferred to fully accredited providers by the deadline of 2012, the Minister replied that he was “confident that the deadline of 2012 can be achieved and that it can be undertaken in a way that does give the necessary assurance”.148 When pressed further he stated that:

In terms of the work that is engaged at the moment, we are focused on the National Forensic Framework Agreement and the potential for asset sales. Obviously, some work may go to the police internally. My strong intention and desire is that that should give assurance and be robust in terms of the way in which this is delivered. There is no reason to suggest that will not happen.149

109. We have serious concerns about the potential transfer of the FSS’s work to non-accredited police laboratories. We agree with the FSR that the transfer of work from the FSS to a non-accredited police environment would be highly undesirable, as this would pose significant and unacceptable risks to criminal justice. If a sufficient match in quality standards cannot be met elsewhere, the Government should, at the least, reconsider the 2012 closure deadline. The needs of criminal justice must come before considerations of financial convenience.

Impartiality and independence

110. In order to achieve accreditation to the quality standard ISO 17025, there is a requirement for a laboratory to demonstrate evidence that its work and results are “free from undue influence or pressure from customers or other interested parties” and that “laboratories working within larger organisations where influence could be applied (such as police laboratories), are free from such influence and are producing objective and valid results”.150

111. The requirement for impartiality also extends to expert witnesses giving evidence in court. The criminal procedure rules, laid down by Lord Justice Auld following his Review of the Criminal Courts in 2001, specify that the expert’s duty to the court overrides “any obligation to the person […] by whom he is paid”.151

112. The FSR produced draft Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System in the summer of 2010 and produced a “pre
The Forensic Science Service

A "dry-run" draft document in February 2011: this document is intended to be used by the UK Accreditation Service (UKAS) to conduct dry runs of the accreditation process in existing ISO 17025 forensic science providers, with a formal, published code expected in summer 2011. The Code builds on ISO 17025 and outlines expectations of forensic practitioners with regards to independence, impartiality and integrity. The Code suggests that forensic science practitioners' "overriding duty is to the court and to the administration of justice" and that they must "act with honesty, integrity, objectivity, impartiality and declare any personal interest that could be perceived as a conflict of interest".

**Private forensic science providers**

113. The accreditation of private sector laboratories was explored in paragraph 97. We heard some concerns that private providers may be inappropriately driven by profit (see paragraph 23). In rejoinder, Key Forensics, a private FSP, stated that:

> There is often an inferred suggestion private forensic service providers are not as impartial as the FSS—a public funded service provider, the private service providers made vulnerable by the requirement to retain clients and generate a profit and thus being subject to coercion by their clients. The reality is that the FSS has been operating as a self financing organisation, generating "fees" for its casework from its clients, on the same basis and under the same financial pressures as the private service providers. To this extent, "risk" of impartiality is thus no greater for private service providers than it was for the FSS. In practice, no private service provider would risk its reputation and, therefore, its future viability for a short term gain that would be lost many times over should such an occurrence ever become public. Similarly, forensic evidence is ultimately provided by forensic experts acting as expert witnesses, whose own careers and integrity rest on what they offer as their opinion. Many of private sector forensic scientists have been carefully selected as the best in their field, and as such display no less integrity than their public sector counterparts, who will also be subject to coercion for any number of reasons, not least to maintain their department's budget. In our opinion there is a low risk to impartiality or quality if forensic science continues to be delivered by high quality, accredited unbiased, impartial and independent forensic science providers.

114. We have seen no evidence to suggest that private forensic science providers would be less impartial than the FSS, but they must be accredited to at least the same standards.

**Police forensic laboratories**

115. The concerns expressed over the lack of accreditation of police laboratories have already been described above. An additional consideration regarding impartiality, which

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152 Forensic Science Regulator, Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System: Pre-"dry run" draft, January 2011

153 Forensic Science Regulator, Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System: Pre-"dry run" draft, January 2011, p 6

154 Ev w72, para 2.2
The Forensic Science Service does not apply to the private sector, is the complication of the police acting as both the customer and provider of forensic services where in-sourcing occurs. The FSS stated that:

Forensic science has to be impartial, and to be seen to be impartial. This issue was raised in a recent critical review of forensic science in the US, in which it was recommended that forensic provision should be separated from police processes. Whilst mechanisms can be put in place to help safeguard impartiality from being compromised, the risk remains higher for undue pressure to be placed on scientists if they work within the same organisation as the “customer”.155

116. Dr Mark Mastaglio, the FSS Principal Scientist for firearms related casework, pointed out that the police could also be the subject of an investigation:

Some of most complex and sensitive work that require firearms forensic science input are the investigation of police fatal shootings and counter terrorist cases. In these areas the FSS staff are the most experienced in the country [...] The fatal shooting of Jean Charles de Menezes by police officers in 2005 provides an exemplar of why we need top class firearms examiners competent in scene reconstruction and wound ballistic interpretation that are totally independent of the police.156

117. The FSS’s London Toxicology team explained that the Metropolitan Police Forensic Science Laboratory had been merged with the FSS in 1995 because of fears concerning impartiality, and stated “here we are, 16 years later, with such concerns apparently being cast to the wind. Many police forces are now setting up forensic services to a varying extent. Most of this appears to be unregulated.”157 The Northumbria University Centre for Forensic Science considered that, although the FSS was never impartial since “its business was undertaken on behalf of the prosecution”, it was “more independent of the police services than the police laboratories had been. It was established to increase scientific and procedural independence”.158 Prospect stated that:

Ministers appear not to have given consideration to how having the police procure and host their own services could have implications for impartiality as well as to public perception of the criminal justice system. Neither is it evident that any thought has been given to the reasons that led to the UK’s forensic science service being provided by an expert organisation independent of the police.159

118. We also considered whether impartiality of police forensic science could be compromised by the need to make savings. The Forensic Science Society, the professional body for forensic practitioners, considered that “constraints on the extent of a scientific investigation for financial reasons are far more likely to result in a biased interpretation”.160 The Royal Society of Chemistry stated that:

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155 Ev 81, para 39
156 Ev w31, para 4
157 Ev w68, para 2.12
158 Ev w129, paras 2.3–2.4
159 Ev 66, para 9
160 Ev w163, para 2
Impartiality of data providers could be compromised. Spending cuts mean police forces have less money to spend on forensics consultancy and are taking this work in house. Police forces have advised that their spend on external forensic suppliers will continue to fall as forces seek to maximise efficiencies. This may mean that there will be pressure to cut corners leading to unsafe prosecutions.\textsuperscript{161}

119. Gary Pugh, Director of Forensic Service, Metropolitan Police Service, took a different view:

There is no reason to believe, or evidence to support a view, that the closure of the FSS will adversely affect the impartiality of forensic evidence used in the criminal justice system. It is suggested that “forensic science for profit” and the commercialising forensic science could undermine the impartiality of forensic evidence and on the other hand work undertaken by police forces would only consider a prosecution view. I have seen no evidence of either of these views, forensic practitioners wherever they work realise that, as the Criminal Procedure Rules set out, their overriding duty is to the courts. [...] The safeguards for the impartiality of forensic science lie within the Regulator’s Codes of Practice and Conduct.\textsuperscript{162}

120. We asked the Mr Rennison, the FSR, whether forensic laboratories should be independent of the police and he stated that:

I don’t think that is necessary. A very good review is the recent Law Commission review around the admissibility of expert evidence, which was published two months ago. They have a very interesting section devoted to this issue of impartiality of expert witnesses—not specifically police experts, but experts across the piece, and in one paragraph they actually quote the police. They point out, quite rightly, that there are very few reported cases where impartiality has been an issue. They are recommending changes to the law built on an assumption that experts, and they include police experts in this, are impartial and understand their responsibilities to the court, which are very clearly set out now in the Criminal Procedure Rules. The evidence to date is that impartiality is not a massive problem in the criminal justice system, but I want to underpin that through accreditation.\textsuperscript{163}

121. On 22 March 2011, the Law Commission published \textit{Expert Evidence in Criminal Proceedings}. The report contains the Law Commission’s recommendations and a draft Criminal Evidence (Experts) Bill. The Law Commission’s recommendations are being considered by the Government. The draft bill builds on existing criminal procedure which states that:

(1) An expert has a duty to the court to give objective and unbiased expert evidence for the purpose of criminal proceedings.

\textsuperscript{161} Ev w166, para 12  
\textsuperscript{162} Ev 103, para 13  
\textsuperscript{163} Q 282
(2) That duty overrides any obligation to the person from whom the expert receives instructions or by whom the expert is paid.\textsuperscript{164}

And suggests additional clauses:

(3) If it appears to the court that there is a significant risk that the expert will not comply (or has not complied) with that duty in connection with the proceedings, the expert evidence is not admissible unless the court is satisfied that it is in the interests of justice that it should be admitted.

(4) The fact that the expert has an association (for example, an employment relationship) which could make a reasonable observer think that the expert might not comply with that duty does not in itself demonstrate a significant risk.

(5) Criminal Procedure Rules may make further provision in connection with that duty.\textsuperscript{165}

122. The report stated that “the mere appearance of bias is an insufficient reason for ruling that an expert’s evidence is inadmissible in criminal proceedings.”\textsuperscript{166} Roger Coe Salazar, Chief Crown Prosecutor, Crown Prosecution Service, considered that:

you have to differentiate between impartiality or bias and the appearance of it. Certainly, for the criminal justice system, the appearance of impartiality is fundamental and very important. [...] We do have to bear in mind the X millions of cases over the years that have been prosecuted—I know there are high profile examples to the contrary—without root and branch issues around bias and impartiality. [...] It is not the panacea to everything, but accreditation does help considerably, because one of the fundamental parts of accreditation is a truly independent assessment. One of the four foundation points of that accreditation is to do with independence and being free of any undue influence.\textsuperscript{167}

If we take the view that that forensic evidence, for whatever reason, is not properly impartial, or of proper integrity and has not been properly validated as a science, we won’t use it.\textsuperscript{168}

Mr Rennison, the FSR, explained that:

There is a risk to quality and impartiality if [the FSS’s] work is moved from an accredited quality focused environment to one lacking such standards. I have written to the police lead on the transition of work and to the Home Office FSS Transition Board (of which I am a member) pointing out these risks and making it clear that packages of work should only be moved following an assessment of risks to quality and impartiality in each case. It is an unacceptable risk to move work to a non-accredited environment, but with varying and possibly manageable levels of risk if

\textsuperscript{164} Law Commission, \textit{Expert evidence in criminal proceedings in England and Wales}, Session 2010–12, HC 829, p 148
\textsuperscript{165} HC (2010–12) 829, p 148
\textsuperscript{166} HC (2010–12) 829, p 177
\textsuperscript{167} Q 213
\textsuperscript{168} Q 144
work is taken on by an accredited laboratory but possibly without some items of work within its scope of accreditation. However, there will have to be an agreed action plan to achieve the required extension of scope to bring the work within the accreditation for that laboratory.  

123. No quality standard or code of conduct can guarantee impartiality. However, we consider that adherence to ISO 17025 and the Codes of Conduct being developed by the Forensic Science Regulator would be a good place for police forensic laboratories to start. Compliance with ISO 17025 is already planned, albeit on a generous timetable. We recommend that existing police forensic labs also commit to the FSR’s Codes of Conduct.

124. We agree that a nebulous fear or perception of impartiality is insufficient reason to condemn police in-sourcing of forensics, although the perception of impartiality is crucial to the courts and public confidence in the criminal justice system. However, given that so few police forensic laboratories have been accredited to ISO 17025, a standard that demands a level of impartiality, we must express concerns about the risks to impartiality of forensic evidence produced by non-accredited police laboratories. We reiterate our previous recommendation that if the FSS closes, transfer of work from the FSS to a non-accredited police environment would be highly undesirable.

125. The introduction of bias based on selective forensic examination of exhibits, arising from the need to make savings is a different risk. We are concerned that the risk may be exacerbated by recent cuts to police budgets and we urge the Government to monitor the situation. Police forces must work closely with forensic science providers to ensure that any selectivity is scientifically justified.

Powers of the Forensic Science Regulator

126. The Forensic Science Regulator (FSR) was appointed to ensure that forensic science provision to the criminal justice system met scientific quality standards. However, the FSR does not have statutory powers to enforce compliance. The FSS explained that:

The role of the Forensic Science Regulator (FSR) is to establish and monitor compliance with quality standards for forensic science delivery to the police and wider criminal justice system. Since taking office in 2008, the current FSR has established a regulatory framework for the UK. This is based on a set of standards planned for issue in April (2011); full implementation was originally planned for December 2013. However, the Regulator does not have statutory leverage for enforcing compliance with the standard.

[...] With the exception of providing DNA profiles for the [National DNA Database], there are no statutory requirements for science used within the [criminal justice

169 Ev 75, para 12
system] to be compliant with any standards so the regulatory framework remains effectively voluntary.\textsuperscript{171}

127. Andrew Rennison, the FSR, stated in his February 2011 written submission that:

Discussions at the Forensic Science Advisory Council\textsuperscript{172} have led to agreements that compliance with the Codes should be based on a mandatory but non-statutory requirement enforced through police contracts, agreements with ACPO and gatekeeping functions by the Crown Prosecution Service.

It is a common and often repeated assertion that compliance with the Codes should become a statutory requirement, to do so has not been necessary to date but is kept under review to be referred to Ministers should it become so.\textsuperscript{173}

However, when Mr Rennison gave oral evidence in April 2011, he explained that he had changed his view:

During the research phase leading up to the development of my role, Home Office officials spoke to many regulators and said, “What sort of regulatory model should we have?” The overwhelming recommendation from that was, “Avoid some sort of statutory model, if you can, because it tends to restrain you.” [...] The recommendation at the time was to go for light-touch regulation but with the regulator having the freedom to move into areas that he or she saw fit. I enjoy that freedom at the moment. [...] However, I am now reaching the conclusion that we have to seriously consider some sort of statutory underpinning of my role and some powers to mandate standards. Now that we have developed and consulted widely on the standards, it is entirely appropriate to consider whether we should be mandating those—bolstering the European regulations and translating that into domestic law with some sort of domestic powers to mandate standards[...]

The model [the Home Office is] developing for the regulation of CCTV in the Protection of Freedoms Bill is giving some very good pointers, I think, to the model I should work to. You appoint a regulator, so there is a statutory underpinning of the role, you ask the regulator to produce codes of practice and conduct that, if required, can be agreed by Parliament and are then published by the Secretary of State—you go through that consultation process—and you list in there the people who have to have regard to those standards. You don’t need to take it any further than that. That is now an active discussion.\textsuperscript{174}

I wrote that submission after the announcement of the closure, and at that time—this is how fast things are moving at the moment—I was quite content with not having statutory powers. I have changed my mind since then because, as I engage more and

\textsuperscript{171} Ev 80, paras 32–33
\textsuperscript{172} The FSR is supported by the Forensic Science Advisory Council (FSAC), which advises him on issues related to quality standards.
\textsuperscript{173} Ev 76, paras 23–24
\textsuperscript{174} Q 287
more with some police forces and others, I am beginning to realise the need to have more muscle behind me to enforce some of this. I have to confess that I have changed my mind slightly since I gave you that written submission.175

128. We asked James Brokenshire MP, Parliamentary Under-Secretary of State for Crime Prevention, whether it was time for the FSR to have statutory powers to enforce compliance with quality standards. He responded:

It is something that I am certainly prepared to consider. The Forensics Regulator has operated, to date, without statutory authorisation and has operated very effectively in that way. But it is something I am prepared to consider if Mr Rennison feels he is not able or is coming up with issues in terms of his ability to deliver on his requirements in relation to standards and quality and giving the assurance that we want him to give.176

129. The Forensic Science Regulator (FSR) has a crucial role in ensuring high quality standards are maintained, and this role will become more important during the transition period. It is time for the Forensic Science Regulator to have statutory powers to enforce compliance with the quality standards and Codes of Conduct that he has developed through what appears to be a robust process. The Government should bring forward proposals to provide the FSR with statutory powers immediately.

**Input to the FSS closure decision**

130. Although sponsored by the Home Office, the FSR operates independently of the Home Office, on behalf of the criminal justice system as a whole. According to the Home Office website, “this independence allows the Regulator to make unbiased recommendations and decisions”.177 Despite being in a position to give unbiased advice to the Home Office, the FSR told us: “I was aware [of the decision to close the FSS] a couple of weeks beforehand, but I was not consulted. I am being consulted now.”178

131. It is unacceptable that the Home Office failed to consult with the Forensic Science Regulator when considering the future of the FSS, as he was a key stakeholder who could have offered a useful, independent perspective.

**Transfer of FSS work and staff**

132. A wealth of skills, knowledge and experience resides with the scientists employed by the FSS. Lisa Webb-Salter, an FSS employee, considered that “the most valuable asset of the FSS is its staff—their skills and knowledge, their commitment and dedication, and their passion for justice”.179

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175 Q 289
176 Q 342
177 “Forensic Science Regulator”, Home Office website, www.homeoffice.gov.uk
178 Q 231
179 Ev w92, para 8.3
133. The Transfer of Undertakings (Protection of Employment) Regulations 2006, (the TUPE regulations), provide employment protection during business transfers and equivalent changes. Government guidance, *Staff transfers in the public sector: statement of practice*, states that:

TUPE implements the 1977 European Council Acquired Rights Directive. In broad terms, TUPE protects employees’ terms and conditions (except occupational pension arrangements) when the business in which they work is transferred from one employer to another. Employment with the new employer is treated as continuous from the date of the employee’s start with the first employer. Terms and conditions cannot be changed where the operative reason for the change is the transfer although changes for other reasons may be negotiated.

134. Prospect stated that:

Compulsory contractual redundancy terms agreed in 2007 between FSS and Trade Unions are established and being used in current redundancies caused by the site closures already underway. Should work transfer to other providers, Prospect believes that two-way support for Transfer of Undertakings (Protection of Employment) Regulations (TUPE) will be required to ensure a smooth transfer of employees.

135. FSS staff that provided written submissions were keen to ensure that TUPE regulations were adhered to. For example, Dr Mark Mastaglio, FSS, considered that “it would be iniquitous to transfer individuals who have dedicated their entire careers to public service on terms that were not covered by [TUPE regulations]].” Lisa Webb Salter stated that:

Several hundred FSS staff were made redundant as a result of the recent closure of the Priory House, Chepstow and Chorley laboratories, and these staff have all left or are currently leaving with the original redundancy package. It is therefore highly insulting and unfair that the staff who remain could now be made redundant under reduced terms. Their rights should be protected.

136. Antonio Queenan, FSS, stated that:

With the current fragile state of the forensic market many of the staff at the FSS are not prepared or are in a position to move to the private companies unless it is under TUPE conditions or after receiving a redundancy payment from the FSS.
137. Several FSS employees highlighted the transfer of the Metropolitan Police Service’s (MPS) drugs contract to LGC Forensics in 2010. Peter Minty, Forensic Toxicologist, FSS, stated that:

The loss of the Metropolitan Police contract for bulk drugs analysis to LGC Forensics, resulted in 17 staff\(^{186}\) being transferred under TUPE. LGC had insufficient room or facilities to take these staff and following provision of funds, generous redundancy terms were agreed.\(^{187}\)

138. Others were more critical of the transfer. For example, Lisa Webb-Salter stated that the staff transferred to LGC Forensics were “effectively discarded” and that “this scenario is likely to be repeated many times over when the work currently carried out by the FSS moves to other providers” at “immense personal cost to the individuals involved, and significant financial cost to the tax payer”.\(^{188}\) Steve Thomas, Prospect, stated that “not one of [the staff] actually ever set foot in an LGC building because they were all made redundant before they even made it”.\(^{189}\) However, David Richardson, Chief Executive of LGC Forensics, told us that:

you received some evidence [...] that may not have been fully informed because the people involved there did, in fact, come to our facility. They had a number of briefings, we offered jobs to all of them, and, for a number of different personal reasons, they decided that they did not wish to work in our Teddington facility. Those jobs were made available to them.\(^{190}\)

139. Jennifer Button, a forensic scientist at the FSS, expressed concerns over the capacity of private FSPs to take on the FSS’s work and staff by March 2012:

With experience learnt from closures underway at these sites [Chepstow and Birmingham], it is apparent that the proposed time frame for an orderly exist of the entire service from the forensic market is at best an unrealistic ambition!

Currently, as the market stands, there are no other forensic providers able to absorb the work of the FSS, which carry 60% of the market. A recent demonstration of my point is a drugs contract lost to LGC. The staff (16) were TUPE’d over and all took redundancy, since the country’s second largest forensic provider could not accommodate them. In light of this, how does the Government propose transfer of 60% of forensic business seamlessly to other providers, especially given the proposed time frame?\(^{191}\)

140. Cellmark Forensic Services stated in their written submission that:

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\(^{186}\) In the written submissions, this figure varied from 16 to 20 staff.
\(^{187}\) Ev w60, para 4a
\(^{188}\) Ev w92, para 8.4
\(^{189}\) Q 45
\(^{190}\) Q 127
\(^{191}\) Ev w4, paras 2-3
The issue of TUPE does give some cause for concern as it has the potential to impact on the commercial viability of the transfer of certain areas of work from the FSS to private companies.\textsuperscript{192}

141. Given the “fragile” state of the forensics market,\textsuperscript{193} the financial position of private FSPs was questioned. The FSS stated that:

Our assessment of publicly available financial information for other FSPs indicates that, prior to recent reductions in demand, only one provider was reasonably profitable. It is likely that, in the current market, none are achieving sustainable returns.\textsuperscript{194}

142. John Haley, FSS employee, stated that:

Two of the major forensic companies in the market have either been close to pulling the plug on their forensic division or going into insolvency. With this sort of “market”, it could lead to old style back logs as companies go out of business and also force these companies to cherry pick even more.

The FSS has around 60\% of the market in the UK. The other companies have taken FSS share over a 4-5 year period, and in this period they have only managed to pick up 40\% of what was a controlled situation. How can these companies pick up 60\% of the market in just over a year? It’s not a simple case of moving producti\on facilities, we are talking about setting up validated laboratories, moving staff and putting controls in place to ensure quality does not suffer.\textsuperscript{195}

143. Mr Richardson, LGC, explained that the shrinking market:

has certainly affected our business in the sense that we are carrying quite a large amount of spare capacity at the moment that we have continued to maintain, initially, with the continuing tendering of work being expected and now, of course, in the light of the decision to close the FSS. So it has had an effect on us from that perspective.\textsuperscript{196}

144. When asked how confident she was that the private sector within the UK would be able to absorb the staff employed at the FSS, Dr Gill Tully, Research and Development Manager, FSS, responded:

one of the interesting historical pieces of information that we can draw on is to look at what has happened to staff from our closed laboratories at Chorley and Chepstow. Obviously, we don’t have a full data set, but, in the main, from the information we have been able to gather, around 90\% of the leaving staff have left the profession completely. There is a real risk to the UK’s capability and capacity to undertake forensic science well. Some of the issues will be to do with relocation. Not all of these

\textsuperscript{192} Ev 74, para 6
\textsuperscript{193} For example, see Ev w111 [Robert Green].
\textsuperscript{194} Ev 78, para 11
\textsuperscript{195} Ev w11, paras 11–12
\textsuperscript{196} Q 85
members of staff, and particularly very senior members of staff who are at a stage in their career where they are settled in an area, will be willing to relocate. There are issues of where the capacity is. Some areas have overcapacity, in some commodity areas, for example. Other areas have under-capacity. There are also areas of specialisms. The one thing that is perhaps exempt from the 90% figure is some very small niche areas where people do tend to stay in the industry.\textsuperscript{197}

145. Bill Griffith, FSS Chairman, added that:

Somehow we have to find a way with this transition, this move, to wind down the FSS, to make sure of the full extent to which other suppliers [...] are able to take the work that becomes available. I am absolutely sure, in contrast to some thoughts that were expressed when the decision was made, that they will need FSS staff: absolutely. We have to find a way of ensuring that that move of staff is done in as efficient and elegant a way as possible. [...] We still do the majority of the work—50% to 60% of the work—in the country, and we have a great capability. It is unimaginable that there won’t be a need to transfer numbers of staff. I would wish that as much of that capability still continues in the criminal justice system, even if it is in a different entity from the FSS. We must find a way of doing that, and all our efforts and discussions are really to search out ways of ensuring that that happens. It is about irreplaceable skills and experience.\textsuperscript{198}

146. The FSS employs over 1,000 staff.\textsuperscript{199} We are deeply concerned about the practicalities of transferring the FSS’s work and staff to other FSPs by the transition deadline of March 2012. The FSS Transition Board must ensure that, whatever the outcome, forensic scientists employed by the FSS are retained within the profession and within the UK to the benefit of the criminal justice system. Transfer of staff to other forensic science providers must be conducted under TUPE regulations and in addition, care is needed to ensure that pension provision is adequately protected.

Archives

147. The FSS has built up, over many years, an archive of case files containing notes, examination records and results of examinations.\textsuperscript{200} It had previously been estimated that the FSS’s main archive held the records of over 1.5 million cases. However, taking into account the case records of the laboratories which have recently closed, together with those that exist at present, the total number of case files within the FSS as a whole was estimated to be 1.78 million in May 2011.\textsuperscript{201}

148. The case files also contain “all the records of continuity; that is where every sample has been, how they have been stored and all such records you would need in order to secure a successful conviction in the future”.\textsuperscript{202} Dr Gill Tully explained that the FSS’s archives also

\textsuperscript{197}Q 45
\textsuperscript{198}As above.
\textsuperscript{199}“Our customers”, Forensic Science Service website, www.forensic.gov.uk
\textsuperscript{200}Q 36 [Dr Gill Tully]
\textsuperscript{201}Ev 94, Annex B: Case files and Associated Paperwork [Forensic Science Service]
\textsuperscript{202}Q 36 [Dr Gill Tully]
contain “a large number of retained material. That includes DNA and microscope slides that perhaps have a very thin smear of a sample taken from a swab from a rape victim that may be the only evidence left in the case”.203 The case files and retained materials alone do not constitute the archives. The FSR stated that:

An equally important issue for me is the many research papers and validation papers locked up in that archive which have never been published. They have to remain accessible and available. We might even look at opportunities for publishing some of those in the future. The archive covers a lot more than just case files.204

149. The archives are important for a number of reasons, but particularly for cold case reviews. These are unsolved crimes where the investigation trail has gone cold (see paragraph 12). Retention of the archive enables forensic scientists to re-examine materials from old unsolved crimes using new scientific techniques. Dr Tully explained that:

In conducting any sort of review into old cases, we use the term “cold case reviews”, which means we go back and undertake a thorough and systematic examination of retained material, archived material, case notes and case files to see if there is any material left that would benefit from re-examination in the light of new methods and techniques that have been developed. This is generally undertaken in close co-operation with the police force that knows what has happened in the case outside the forensic arena. We have undertaken that type of analysis in many cases. We have had over 220 successful convictions from very old material based on using new methods and new techniques.205

150. The FSS highlighted the costs of maintaining archives:

It was estimated that in April 2008 the non-staff running cost of storage, within the FSS, was in excess of £445,000 per annum. This is an overhead which other forensic providers do not have to bear. It is understood that their general practice is to return all items and the majority of materials generated to the originating police force.206

151. David Hartshorne, Cellmark, confirmed that “a more common approach nowadays is for evidence to be returned to police forces, but case files would remain with the supplier”.207

152. The material in the FSS’s archives is owned by police forces.208 However, Dr Tully told us that “these sorts of archives and their accompanying records do not exist in police forces or elsewhere, so the magnitude and the importance of the archive cannot be underestimated”.209 Steve Thomas, Prospect, added that:

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203 Q 36
204 Q 294
205 Q 36
206 Ev 94, Annex B
207 Q 129
208 Q 222 [Chief Constable Sims]
209 Q 36
It is right to look at the actual records and the archives that exist, but one thing that is important to our members and the employees of the FSS is the intellectual record that accompanies the work that is done. Our concern would be that you could move the archive—if you want, you can term it as a “library”, although it is more than that—from one place to another and have someone else run it, but if you don’t transfer the skills and the knowledge that have been built up, in some circumstances over decades, which understand how the original methodology was used and what should be given reconsideration when technology advances, you lose that link. When that happens not only do you, potentially, lose the access to the record, but you lose the context in which that analysis is done.

There is the physical side of archiving, but, for us, there is also concern about the intellectual qualities required for that.210

Dr Tully agreed “fully” with Mr Thomas on intellectual capability and added that:

at the moment there are over 5,000 metres of storage space involved and 17 people just maintaining the records. When you look at the skills needed, as Mr Thomas said, to mine these records, you need the historical understanding and the context of how the cases were undertaken. You need to be able to understand how the notes were written, the shorthand and so on. That skill needs to be preserved for the future and there needs to be succession planning for that skill, otherwise it will be just a warehouse, which is no use to anyone.211

153. Dr Tully considered that intellectual capability “is even more important than where the physical archive is located” and that “if that skill set is broken up, that would be of huge damage to the criminal justice system.”212

154. Mr Thomas questioned the profitability of cold case work for private companies.213 We asked Mr Hartshorne, Cellmark, how profit could be made from cold case work.214 He responded that:

In the same way we would make a profit out of all the forensic work that we undertake. There seems to be a misconception that the private sector won’t do complex casework or do cold case reviews.215

[...] Just as with all forensic work, the work is charged according to the work that is undertaken. That is no different in a cold case as it would be for any other forensic case that comes to us immediately after the offence.216
155. The Criminal Cases Review Commission (CCRC) investigates alleged miscarriages of justice and can refer cases back to the appeal courts. It stated that:

The FSS archive needs to be maintained. Its existence is essential to reinforce confidence in the [criminal justice system] and essential to the work of the Commission. If the archive is broken down and distributed to police forces, which may be one possible option, the degree of fragmentation will be huge, and undoubtedly very expensive to manage. It increases the risk of material going missing if it is not held centrally. It will certainly increase the time taken for the Commission to review cases. Once fragmented, the archive will also be lost forever in terms of its research and development potential.217

156. Dr Gary Pugh, London Metropolitan Police, agreed that the archives were important and a rich source of material for cold case reviews. He added that “most of the information contained in that archive comes from police investigations. Clearly, individual police forces will have an interest in making sure that material is retained.”218 Chief Constable Chris Sims, ACPO, stated that:

The solution, to an extent, depends upon the transition solution for different parts of the FSS. For example, if part of the FSS was taken over and run as a going concern by someone else, then the expectation from ACPO would be that part of that new contractual arrangement would be the maintenance of the existing archive.219

157. Chief Constable Sims appeared to believe that the archives should be kept as a single entity, but added the caveat “well, it slightly depends on how the FSS transition goes”.220 The FSR stated that “for many reasons” he was in favour of keeping the archive as a single entity.221 In contrast, Mr Richardson, LGC Forensics, believed that “various models could be made to work. I don’t think it necessarily needs to be a single entity but, clearly, it would make administration easier” and that “it would be perfectly possible for that archive to be run and administered by the private sector”.222

158. The Minister told us that he was “open-minded at this point in time as to whether [the archive] best resides in one receptacle or whether it can be provided in a different way in different places”.223 He was “very alive to this issue of cold cases” and stated:

That is why I am seeking specific guidance and advice and giving careful consideration to this point in relation to securing that archive and ensuring information is available for cold case reviews. It is absolutely essential that it is

217 Ev w157, para 28
218 Q 219
219 As above.
220 Qq 220-23
221 Q 294
222 Qq 128–29
223 Q 352
available in a joined-up way. I will look very carefully and closely at the evidence and advice that is given to me in terms of the best way to achieve that. 224

159. We cannot see any benefits to breaking up the FSS's archives, including case files, retained materials, research and validation papers and the intellectual capability supporting the archive. Whatever the future of the FSS, the existing archives must physically remain as a single, accessible resource, supported by suitably qualified and experienced experts. This would be in the interests of the criminal justice system.

160. There may be benefits in developing the FSS's archives further into a comprehensive national resource. The custodianship of the archives should be agreed in the context of the NPIA’s wind-down as well as the FSS transition. We recommend that private FSPs contribute suitable documents and materials to what we would term the “National Forensic Archives”.

161. The archives are useful to investigations of potential miscarriages of justice as well as cold case reviews. The CCRC, who conduct such investigations, explained that:

Section 17 of the Criminal Appeal Act 1995 gives the Commission extensive powers to obtain material held by public bodies. [...] This includes the power to obtain files, materials and samples held by the FSS. Without our section 17 power the Commission would be significantly hampered in its work and it would undoubtedly lead to miscarriages of justice not being corrected and a consequent loss of confidence in the CJS. 225

162. The CCRC added that:

prior to the FSS becoming a limited company in 2005, there was no question that the FSS was a public body and so we were able to use fully our section 17 powers. In 2005 the FSS became a GovCo, a company owned entirely by the Government. This meant that as the FSS continued to be funded from the public purse there was again no question regarding the use of our section 17 powers. 226

163. The CCRC has no powers to compel private companies to make materials available, 227 and it expressed concern that distribution of the FSS’s work to private companies may mean the CCRC would be unable to access important material for reviews. It stated that:

Not only will the work currently underway need to be re-distributed but so will the vast quantity of scientific material/evidence held in its archives, storage facilities and on its data bases. It is this information that is crucial to investigations, some of which are only possible with scientific advancements which could necessitate accessing material many years post conviction. 228

The CCRC’s view on the potential impacts was clear:

224 Q 353
225 Ev w156, para 15
226 Ev w156, para 16
227 Ev w156, para 21
228 Ev w156, para 20
The impact [that distribution of archives] will have on our work should not be underestimated and will be nothing short of disastrous for the Commission’s casework, for those who may have been suffering a miscarriage of justice and for the wider CJS. This will undoubtedly mean that cases which would otherwise have been referred back to the appeal courts will not be and conversely cases which could be concluded quickly (because the use of our section 17 powers can confirm that the conviction is sound) will take a great deal longer to conclude.229

164. The CCRC conceded that in the few cases where they had to go to a private FSP, they “met with no resistance” and stated “indeed it would be counter intuitive for one of the main FSS competitors to negotiate police contracts and then decline to pass to the [CCRC] material”. However, they were concerned that “it is one thing to have a statutory right to obtain material, and entirely another to have to negotiate for it”.230 The CCRC suggested legislative change to extend their powers to private companies, or building suitable conditions into contracts awarded to private FSPs to ensure compliance with the CCRC’s requirements.231

165. Section 17 of the Criminal Appeal Act in 1995 may have been sufficient to enable the Criminal Cases Review Commission (CCRC) to obtain materials when the FSS, as a public body, was the main provider of forensic services to police forces. Although this appears not to have been a problem to date, the increasing penetration of private FSPs into the forensics marketplace means the CCRC’s statutory powers are becoming increasingly ineffectual. Whatever the future of the FSS, we recommend the Government consider extending the powers of the CCRC to obtain materials from private forensic science providers.

229 Ev w156, para 21
230 Ev w157, paras 23–24
231 Ev w157, para 25
4 Research and development (R&D)

Home Office Review of R&D

166. On 27 January 2011, over a month after the announcement that the FSS would be wound down, the Home Office announced a review of forensic science research and development (R&D), to be led by the Chief Scientific Adviser (CSA) to the Home Office and the Forensic Science Regulator (FSR). The consultation document stated that “it is important that the Home Office’s approach to forensic science includes an informed analysis of the relevant forensic science research and development”.232 The aim of the review was to provide Ministers with advice on the current and likely future status of forensic science research and development in the UK and to make other recommendations as appropriate.233 The report was originally expected to report to Home Office Ministers by the end of April 2011,234 but to date has not yet been published.235

167. The Home Office stated that the review was “not directly related to the wind-down” of the FSS.236 Prospect, in its written submission, stated that:

our members are understandably sceptical of the review’s intent given that a genuine review would be expected to inform a decision whereas in this case the outcome has already been announced.237

The Home Office’s consideration of the impacts to R&D

168. As part of our inquiry we considered whether the Government had sought the advice of the Home Office Chief Scientific Adviser (CSA) prior to the decision to wind down the FSS. The Guidance for Chief Scientific Advisers and their officials, published by the Government Office for Science (GO Science) states that one of the CSA’s roles is:

performing an independent challenge function to the department, ensuring that science and engineering evidence and advice is robust, relevant and high quality and that there are mechanisms in place to ensure that policy making is underpinned by science and engineering.238

169. Professor Bernard Silverman, Chief Scientific Adviser to the Home Office, explained his role and level of independence from the Home Office:

We are appointed as civil servants. [...] It is my full-time job. We are appointed under the code of practice for scientific advisers. I am a member of the group chaired by Sir

232 Home Office, Review of research and development in forensic science: background and terms of reference, January 2011
233 As above.
234 Ev 60, para 10 [Home Office]
235 As at 22 June 2011
236 Ev 60, para 9
237 Ev 65, para 1
238 Government Office for Science, Chief Scientific Advisers and their officials: an introduction, undated, para 21
John Beddington, the Government Chief Scientific Adviser, and independence is written into my job description.

I have a threefold role. First of all, I provide scientific advice to the Home Office, Ministers and officials on any scientific matter relevant to our work. Secondly, I head the Home Office science group, which is a group of about 400 people who work in every scientific discipline, including economics, statistics, physical sciences, social sciences and so on; to advise on Home Office policy matters. Thirdly, I am a member of the group of scientific advisers across Government, which gives me an overarching background to the work that I do. I take my independence extremely seriously and I am expected to be independent. That is the whole point of my job.\(^{239}\)

170. When asked whether he had been consulted on the decision to wind down the FSS, Professor Silverman stated that:

> I was told about the decision a couple of weeks in advance; I am not sure exactly how many. I think it was in late November, or possibly mid-November. But I was sworn to secrecy until the decision was announced. I was informed and John Beddington [the Government Chief Scientific Adviser] was as well. [...] We were told it was going to happen. We were not consulted, as such, in advance of the decision being made, but we were informed. When the decision was made, we had been tipped off in advance.

> My understanding, at the time and now, is that the decision was taken on legal and commercial grounds and that it is not within the Chief Scientific Adviser’s remit to advise on those matters. Therefore, I did not see the process as unreasonable.\(^{240}\)

171. When scrutinising the Government’s proposal to change the FSS into a Public-Private Partnership in 2005, our predecessor Committee noted that “the low visibility of the Home Office Chief Scientific Adviser is a source of concern, particularly in view of the history of weak scientific culture in the department”.\(^{241}\) A Departmental Chief Scientific Adviser (CSA) has unique independence and is therefore, rightly, expected to provide a crucial challenge function to the Department. It may not be within the CSA’s remit to advise on legal and commercial matters, but it is certainly within his remit to advise on scientific matters relating to the closure of the FSS, a Home Office-funded centre of scientific excellence. We consider the CSA’s satisfaction with his exclusion from the decision-making process and his failure to challenge the decision to be unacceptable. This is a further demonstration of the ongoing weak scientific culture in the Home Office.

172. When we asked James Brokenshire MP, Parliamentary Under-Secretary of State for Crime Prevention, whether he had made any assessment of the likely impact of the FSS’s closure on forensic science R&D in the UK before the decision to close the FSS was made, he replied that:

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\(^{239}\) Q 230

\(^{240}\) Q 231

\(^{241}\) HC (2004–05) 96–I, para 7
There was no formal assessment of the R&D elements as such but I was very conscious, in making this decision, of the potential impact on R&D. For example, if we had gone down the restructuring route, one of the things I was specifically concerned about was the fact that R&D investment would have been significantly squeezed as a consequence of taking that option rather than any other option. While there was no formal assessment, it would be completely wrong to characterise the decision as not considering or not taking account of the issues of R&D and future investment. Indeed, I am very conscious of that and that is why Professor Silverman has been engaged to conduct the review he is conducting at the moment.\textsuperscript{242}

173. Given that Prospect and its members were sceptical of its timing, we asked whether the review of R&D should have preceded the FSS wind-down decision and announcement. Professor Silverman replied that:

It is obvious that the review was prompted because of the attention drawn by the closure of the FSS. There is no doubt about that. If you had started a review before the closure was announced, it would have signalled that something was up. I don’t think you could do that. It is right that we should have a landscape within which we can now conduct a review. To conduct a review against a changing landscape would be difficult. For example, I wouldn’t have suggested starting the review before the decision was announced. Once I was told that the decision was going to be made, it made sense not to commission a review until after the decision had been made. Then we have a landscape within which we can see what is going on.\textsuperscript{243}

174. In answer to the same question, the Minister responded “no” and explained that:

The reason I say that is that the FSS is only one part of this. You need to look at the academic institutions and at the investment that private companies and others are undertaking as well. Also, consider that we were presented with a situation where the FSS, as a consequence of the Companies Act, were saying to us that they were in a zone of insolvency and that they would be at risk of going into uncontrolled administration unless some form of action was taken by the Home Office, which would not have allowed a proper review, at that stage, of these issues. That is why I talk about this being a commercial decision. It was not that it was only focused on commercial issues, but it was driven by the fact that the FSS was presenting itself as being in a zone of insolvency and of physically running out of cash. [...] I see the review that Professor Silverman is undertaking, which will be coming forward shortly, as instrumental in setting out where forensic research is at the moment, how it may need to be better joined up and how we need to have a better understanding of that. But I see that as distinct from the decisions that the Home Office had to take in relation to the FSS, albeit that, obviously, the FSS does undertake some R&D investment work at this point in time.\textsuperscript{244}
175. We are concerned that no formal assessment was made of the impact of closing down the FSS on forensic science R&D before the decision was made and announced. We have not seen any evidence of an informal assessment. We are very concerned and disappointed that the Chief Scientific Adviser to the Home Office was not consulted prior to the decision to wind down the FSS.

176. We were given various reasons for the timing of the Home Office Review of R&D. The Chief Scientific Adviser implied that one reason may have been a preservation of confidentiality and that the Review may have been prompted by the attention drawn by the closure of the FSS. The Minister told us that a lack of time was the driver. The reasons for the timing should be clarified.

177. The relationship between recommendations made by the Home Office Review of R&D and the work of the FSS Transition Board, set up to oversee the wind-down of the FSS, must be made clear.

**UK forensic science R&D**

178. Forensic science research is spread across a number of different organisations. As Professor Silverman noted, “it is not true at all that the only research being done is being done by the FSS”. Key players include the FSS, private companies and university research groups.

179. Because of the broad definition of forensic sciences, and the overlap with other scientific fields such as medical and analytical sciences, it is difficult to arrive at a conclusive figure of how much is invested in forensic science R&D in the UK. Professor Silverman stated that:

> I don’t think it is easy to quantify. If you ask different companies they will give you figures. [...] There is no ring-fenced specific budget from public funds for research in forensic science. What will happen is that there will be projects which have funding from research councils and there will be academics who are funded by HEFCE. Sometimes it is quite difficult to identify exactly what is and is not forensic science, and there is no easy way of quantifying.

180. Nevertheless, we were able to obtain some useful indicative figures. Professor Silverman told us that:

> The Home Office does fund some forensic science work itself. It spends £280,000 on fingerprints, the [Office for Security and Counter Terrorism] spends about £500,000 on conventional explosives and work is being undertaken on nuclear forensics at Aldermaston. We also do work on roadside drugs, prototype drugs and so on. So there is work on drugs, explosives and legal highs. The total figure that I have is £2.338 million.

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240 Q 240
245 Q 245
246 Q 246
This is work on forensics but it is on specific areas which the market is unlikely to deal with or where there are national security reasons for it to be done in-house.248

181. Dr Gill Tully, Research and Development Manager at the FSS, told us that:

our spend [on R&D] over the last number of years has been in the region of £3 million to £4 million a year. That is only on the central research and development facility. You have to add to that our IT development of several millions a year and the development that has happened in our operational laboratories.249

182. FSS expenditure on R&D decreased significantly between 2009–10 and 2010–11. The FSS spent £4.01 million on R&D in 2008–09, £4.11 million in 2009–10 and an estimated £3.3 million in 2010–11.250 Dr Tully explained that “this year it has reduced since the announcement in December”.251

183. LGC Forensics, the UK’s largest private forensic science provider, spent “between 5% and 10% of [its] forensics revenues on research every year”252 (exact figures were not publicly provided). Cellmark, one of the next largest forensic providers, spent “about £1 million last year on R&D”.253

Forensic science research in universities

184. Professor Jim Fraser, University of Strathclyde stated that “it is difficult to convey the lamentable state of research in forensic science compared to other scientific disciplines”.254 Professor Brian Caddy, Emeritus Professor of Forensic Science, University of Strathclyde, stated that “very few universities have any research output in the area of forensic science [...] and this is exacerbated by a great reluctance of the government science research councils to support such research”.255 Research Councils UK (RCUK) confirmed that Research Councils “do not currently support forensic science research as a strategic priority”.256 Professor Fraser, also of Strathclyde University, stated that:

The research councils talk a great deal about the “impact of research”. What could be more impactive than criminal justice? What could be more interdisciplinary than forensic science? It is, fundamentally, by definition, an interdisciplinary business. It links policing investigation and criminal justice to science and other areas of activity, yet the word “forensic” is mentioned in the last five annual reports of RCUK on two occasions and there is virtually no funding.257
185. There was little optimism that the closure of the FSS would improve the R&D situation. For example, Sir Alec Jeffreys, Professor of Genetics, University of Leicester, described the move as “potentially disastrous” and stated that:

The FSS serves as the natural national focus for forensic R&D, taking in basic developments arising in academia from the biological, medical, chemical, physical and mathematical/IT sciences and, where appropriate, adapting and refining them for use in forensic analysis. Some of these refinements might occur in the academic sector but this is unpredictable and again, the natural conduit prior to forensic implementation should be through the FSS. Forensic developments are now becoming less common in the academic sector given that the Research Councils and Charities are reluctant to fund forensic science, seeing this instead as the responsibility of the Home Office (reflecting the origins of the FSS). 258

186. When he gave oral evidence to this inquiry, Sir Alec described how some academic forensic scientists’ research had to be “paid for on the back of casework income that they generate.” 259 Professor Peter Gill, Professor of Forensic Genetics, Oslo University, stated that “it has also proven extremely difficult to obtain funding via EU programmes.” 260

187. Professor Fraser described the importance of political will to support forensic science research:

The issue about the research councils [...] is that they will formulate their objectives on the basis of the political environment around them, and if there is no political will for this then they are unlikely to do so. [...] They fund some areas that overlap with parts of the forensic science [...] So there is funding for things like security research. A great deal of that is around very narrow areas, say, digital evidence, detection of explosives and so on and so forth. With regard to the broader issues, the real need for research, in my view, in forensic science has to balance the science and the procedure on investigative issues linked to criminal justice outcomes. That is not a proposition that any research council will respond to, until the political will is developed that shows that that is something that is desirable. 261

188. Professor Fraser explained that political will referred to “the aims of the Government and the aims of the various political parties”. 262 He considered that “if forensic science or science and justice was considered to be of political importance, then the research councils would respond to that”. 263 The Forensic Institute stated “it is [...] a sad fact that no government has made any plan to replace or expand research in forensic science”. 264 Sir Alec suggested:

258 Ev 63, para 1a
259 Q 98
260 Ev w20, para 6
261 Q 99
262 Q 107
263 As above.
264 Ev w121, para 12
a clear concordat between the Home Office and RCUK agreeing an indicative national budget for forensic R&D and with a clear understanding of which organisations would be responsible for funding, together with coherent plans for how national research priorities will be set and how funding will be allocated.\textsuperscript{265}

189. When we asked Professor Silverman whether forensic science was seen as a priority within Government, he replied:

The research councils do not, at present, see forensic science as a strategic priority. My understanding is that there are recommendations and suggestions I can make in my report which might encourage them to do so. It is not simply a matter of the research councils announcing that forensic science will be a strategic priority. It is a matter of the community. It is a matter of articulating. It is the users at the sharp end getting together and putting a case to the research councils for forensic science.\textsuperscript{266}

Within the Home Office [...] we see forensic science as something where we should spend some research money on specific areas. More widely, I don’t think there is specific funding of forensic science research as such.\textsuperscript{267}

190. Professor Silverman did not consider that the closure of the FSS would leave a R&D vacuum in the UK. He explained that:

A lot of R&D is going on in many different places. In the sense that other companies, some of which have given you evidence already, are equally involved in R&D, every scientific company in every area does R&D. This is going slightly outside the scientific remit to answer that question. If you ask the question, “Is there R&D in forensic science other than in the Forensic Science Service?”, which is the question I would rather answer, the answer is definitely there is, yes.\textsuperscript{268}

191. There was scepticism that private FSPs would increase their R&D expenditure if the FSS closed, with a distinction made between profitable and non-profitable areas of R&D. For example, the Centre for Forensic Investigation, Teesside University, stated that “with a shrinking market it is not conceivable that the commercial market of forensic providers will fund 100\% of the research”.\textsuperscript{269} Sir Alec stated that:

Closure of the FSS will also make the more complex and interdisciplinary forensic analyses impossible within the UK, since no commercial provider can give this breadth of service, nor would wish to given that such investigations are unprofitable.\textsuperscript{270}

The private sector quite rightly contributes to forensic testing in the UK. However, they will only run with tried and trusted techniques that can be adapted to routine
high volume and profitable testing. They cannot be expected to contribute to the R&D aspects of forensics and in general do not have the personnel, experience, culture and financial resources to so contribute; horizon scanning and R&D are resource-intensive activities that cannot be supported by companies working in a competitive market.\textsuperscript{271}

192. David Richardson, LGC Forensics, stated that “we see investment in R&D, particularly at the front end but throughout the research chain, as being very important, both to our credibility as a provider and, frankly, to our commercial success in the longer term”.\textsuperscript{272} However, David Hartshorne, representing Cellmark, stated “our R&D tends to be more at the development stage. To bring scientific techniques through to the criminal justice process requires huge amounts of validation and development. That tends to be where the focus of our research is”.\textsuperscript{273}

193. The Minister had different expectations of the private providers, despite having not consulted them prior to the decision. He stated that:

We have seen that private companies are very much investing in research and development and innovation moving forward. Therefore, our expectation is that there will be increased investment in this field as the private sector’s share of the market continues to expand and grow as we move through that transition. That was very much our expectation and our consideration when the decision was taken to opt for the wind-down.\textsuperscript{274}

194. Although private FSPs invest in R&D, it is probably unreasonable to expect private companies to increase their investment in some areas of forensic science research, particularly in fundamental research, at a time of market uncertainty. Private companies do, however, have a key role to play in development and application of research and ongoing validation of methods.

195. Although we are hesitant to call for increased research funding in the current economic climate, the case for increased public funding specifically for forensic science research is compelling. We consider that the Home Office and Research Councils have an interest in the health of the forensic science research base and should develop a new national research budget for forensic science. The views of the forensic science community should be sought when determining the size and scope of the budget and details of its administration.

\textbf{Coordination}

196. The written submissions we received highlighted the importance of coordination of forensic science research efforts. For example, the Centre for Forensic Investigation, Teesside University, stated that:

\textsuperscript{271} Ev 64, para 4(a)
\textsuperscript{272} Q 90
\textsuperscript{273} As above.
\textsuperscript{274} Q 310
The whole research arena is currently very uncoordinated and not sufficiently integrated. Universities can support forensic science development but coordination is essential to minimise duplication and ensure the appropriate areas are explored.275

197. Forest Forensic Services considered that:

The move of the FSS to a Government Owned Company and expansion of the forensic marketplace resulted in a transfer of strategic development and coordination of R&D at a national level away from the FSS to the NPIA. A subsequent lack of direction, difficulties in the introduction of new technology that ensued [...] and lack of coordinated investment have had a significant impact on the development of new technology in the forensic field.276

198. Forensic Service Northern Ireland (FSNI) also noted “with concern attempts by the NPIA over the last year to control forensic science R&D centrally”, explaining that:

R&D in forensic science is essentially the application of proven science from other areas into the forensic arena and therefore is best driven by the practitioners in response to their customers’ needs. Whilst coordination is essential, this must not be centralised control and vetting as currently envisaged. Neither ACPO nor NPIA are well placed to lead forensic R&D strategy but should instead restrict themselves to defining their future needs, rather than the solutions to them.277

199. The FSS itself did not escape criticism. Professor Fraser stated that the FSS:

in their recent guises, as they became an agency, they have been quite a difficult organisation to work with when it comes to research. They are very protective. We have had instances where the research has just fallen by the wayside. The move towards a commercial organisation has restricted the research focus and their willingness to exchange information. These collaborations are really quite difficult to manage but not impossible. If you look at a company like Philips, they have a huge R&D programme. They work extensively with universities. They are very effective at exchanging information for research and development, so it is not impossible. The research culture in the UK at the moment cannot support those collaborations. The trust and the understanding is not there.278

And Sir Alec Jeffreys added that:

Another problem is that, if you visit the website or the annual report of any respectable research organisation, the first thing you come across is very detailed information on the research projects and so on. That is crucial; that is the shop window; that is what gets the message out and starts building up collaborations. I have spent a considerable amount of time on the FSS website looking through annual reports and there is virtually nothing at all. That is a real concern. One of my real

275 Ev w143, 1.4.1
276 Ev w49, para 1(b)(i)
277 Ev w75, para 3.1(c)
278 Q 97
concerns is the effectiveness with which FSS has interfaced with academia in a two-way process. I have doubts about that. This applies to transparency and peer review. Are they running their science programme in a way that I, as a scientist, have to do? Everything I do has to be peer reviewed, judged by my peers, and, if it is deemed appropriate, I will get the funding. I am not sure, again, that that culture is fully pervading the forensic sciences in this country.\textsuperscript{279}

200. The FSS appears to have worked in a manner that was not conducive to collaboration and coordination of research efforts. The pressure to act as a commercial organisation appears to have been a key factor.

201. Coordination and collaborations leading to exchange of knowledge are vital to the health of any scientific discipline. We expect that the Home Office Review of R&D will examine this matter in more detail and that it will bring forward detailed recommendations on this.

\textbf{Skills}

202. A key concern was the potential loss of skilled forensic scientists from the profession or from the UK, following the FSS’s closure. A loss of skills had already occurred as a result of the FSS’s transformation programme, through which the FSS had been aiming to reduce its headcount by 608 by the end of 2010–11\textsuperscript{280} and Dr Gill Tully, Head of R&D at the FSS, explained that around 90% of the staff who left as a result of site closures had left the profession completely.\textsuperscript{281}

203. Sir Alec pointed out that:

The FSS R&D staff have the range and depth of experience needed for this horizon scanning and for the multi-disciplinary work needed to move basic research into forensic utility. The loss of this expertise would rule out the UK as a significant contributor to forensic science development, making us dependent on new technologies developed abroad. There are five consequences: (1) delay in implementing the latest technologies, (2) lack of national expertise required to evaluate and implement new methodologies, (3) lack of representation in those organisations that are actually doing the science, (4) lack of a central organisation required to standardise, validate and ensure quality control, and (5) potential loss of [intellectual property] and downstream revenues.\textsuperscript{282}

204. The closure of the FSS may be a deterrent to future aspiring forensic scientists too. Sir Alec Jeffreys pointed out that the closure:

\textsuperscript{279} Q 97
\textsuperscript{280} Ev 84 [Forensic Science Service]
\textsuperscript{281} Q 45
\textsuperscript{282} Ev 63, para 1(b)
will scare off the new people coming into the field. There are many people going to universities who want to study forensic science. They are suddenly realising that they are in a market where the opportunities for employment are dwindling.\textsuperscript{283}

While Professor Jim Fraser did not dispute this, he added a different perspective:

The situation is inflated, anyway. There is a fashion for forensic science at the moment that is, frankly, unhealthy. Most of the educational programmes are driven by the business needs of universities and not by the needs of employers. It was inevitable that this boom would bust. [...] When it is quite plain that the employment opportunities are much more limited, the market will then settle down to something more realistic and people coming into forensic science will go into it with some realism about what it is and what kind of education they need.\textsuperscript{284}

205. When asked whether he had any concerns about the potential loss of forensic scientists, Professor Silverman did not consider that he had “enough information to comment” and stated that:

One of the issues is that in every scientific area there is always fluidity of a market—employees moving around. If we can create a good environment generally, that should help deal with that situation. I don’t specifically share those concerns but it would be sad if anything happened which meant that good work was no longer being done.\textsuperscript{285}

206. Andrew Rennison, the FSR, stated that:

we have a considerable number of very experienced scientists at the top level. There is quite a strongly held view out there, and it is a view I share, that there are probably too many of those because there was a recruitment freeze in the FSS for about 10 years. So we have built up a good deal of very experienced scientists. There was a bit of a gap behind them, but there are a lot more very experienced middle-service scientists coming up through the system now.

What is worrying me is where all these very experienced scientists will go. I have been speaking to the other commercial providers about this and there are mixed views. Some say that, to date, they have had no problems with recruiting those most experienced people—because they do need them—as mentors for the abundant number of more junior scientists that are left who do the majority of the desk or bench work. To date they have not had a problem with recruiting those most experienced scientists, but there is a concern, in the current climate, whether those people will stay or go. That is something I will have to monitor.\textsuperscript{286}

207. Although we acknowledge the difficulties in tracking the movements of scientists in the UK and abroad, it is important that the impact of the FSS’s closure on its forensic
scientists is monitored. The FSS and Government should ensure that the first destination of all forensic scientists that are made redundant or leave the FSS as a result of the proposed wind down are recorded. We request an update on this matter by June 2012.
5 The decision to close the FSS

208. The announcement made in December 2010 that the Forensic Science Service (FSS) was to be wound down by March 2012 was a culmination of developments and decisions taken over the past two decades. The common view appears to be that neither the current nor previous Governments handled the FSS’s situation particularly well. For example, the Centre for Forensic Investigation, Teesside University, stated that “the move into the commercial market in the early 90’s found the FSS lacking and it never really adapted or was allowed to adapt its business adequately to survive”. In addition, we have been mindful throughout this report that the majority of the decisions that we have criticised relating to the FSS’s status and restructuring, the forensics market, police in-sourcing and forensic procurement strategy were made under the previous administration. We must state our disappointment at the historical inadequacies in government decision-making that brought the FSS to its current dire financial situation. While we have been critical of the current Government’s actions, it must be put on record that we consider much of the responsibility for the current problems facing the FSS to lie with previous administrations. The changes made to the FSS since it became an Executive Agency in 1991, coupled with a subsequent lack of Government understanding of the nature of the growing forensics market, meant that problems inevitably arose.

Consultation and evidence-gathering

209. The Forensic Science Society stated that:

It was generally felt that the proposed closure was an ill thought out and regressive step which could compromise the quality of forensic science, inhibit research and development and could jeopardise its contribution to the criminal justice system.

210. Forensic science is part of a broad landscape spanning the scientific, policing and criminal justice communities and the FSS does not operate in isolation. Having considered the key stakeholders with an interest in the future of the FSS, we would have expected the Home Office to have considered the position of the following people or organisations prior to reaching a final decision:

i. the Association of Chief Police Officers (ACPO) or behalf of the police customer;

ii. the Crown Prosecution Service (CPS), another key customer;

iii. private forensic science providers (FSPs) who might reasonably be expected to take on FSS’s market share, assets and staff;

iv. the Home Office’s Chief Scientific Adviser (CSA) on the potential impacts on science and research;

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208 Ev w143, para 1.1
209 Ev w163, para 5
v. the Forensic Science Regulator (FSR) on potential impacts to quality standards; and

vi. the Forensic Science Service itself.

211. We have already set out our disappointment that the Government took advice from ACPO, but not private FSPs, the CSA or the FSR. The CPS is also a key customer of the FSS, albeit not the paying customer. Roger Coe-Salazar, Chief Crown Prosecutor at the CPS, told us that the CPS was informed about the proposed closure of the FSS “right at the very end of November” and that:

The advice, and I use that word very loosely, that was provided was via the Attorney-General’s office, which was a mechanism of highlighting the risks that would be presented to the criminal justice system should that closure not be managed in an appropriate and proper way. There was no further advice outside that.289

212. The CCRC, being reliant on the FSS’s archives for some of its reviews,290 is another criminal justice customer of the FSS. However, the CCRC stated:

In light of our extensive experience and expertise and the pivotal role the Commission plays in the CJS, the Commission is surprised not to have been consulted prior to the decision being taken to wind down the FSS.291

213. When we asked James Brokenshire MP, Parliamentary Under-Secretary of State for Crime Prevention, whether the CPS had been consulted prior to the closure decision, he responded that:

The Crown Prosecution Service was engaged. They were consulted as part of this process. [...] The CPS was engaged, via the Attorney-General, through the clearance processes in making sure that there was satisfaction across Government in terms of the decision that we took in relation to the wind-down.292

214. The Attorney General fulfils the role of chief legal adviser to the Government and oversees the principal prosecuting authorities within England and Wales: the CPS and the Serious Fraud Office.293

215. It appears that the Attorney General was first engaged only through the clearance processes, that is, the process by which Government-wide confirmation was obtained, after the initial decision had been made by the Home Office to wind down the FSS. We are surprised that the Director of Public Prosecutions, the head of the CPS, was not directly consulted. The Criminal Cases Review Commission does not appear to have been involved at all. This is unsatisfactory and unjustifiable given the impact the closure of the FSS could have on the work of the criminal justice system. It should not need to be stated that forensic science is a service for criminal justice, not just policing.
216. It was clear from the written submissions as well as the public reaction that the announcement of the FSS’s closure came as a surprise to many. However, we would not have expected it to come as a surprise to the FSS’s senior management. We took oral evidence from Bill Griffiths, Chairman of the FSS, who explained the process leading up to the 14 December announcement:

The final notification to us was on 25 November 2010. We had a meeting with the Minister and we were formally told what the decision was. We had a board meeting the following day, which was a Friday, and we met as a senior management team on the Saturday to do some preparation. The actual announcement came out, of course, on 14 December, and that was the time that the business in general and the staff were told. We were under an embargo not to announce the detail until the statement had been prepared.\(^{294}\)

That sounds out of context in a way, because in the period leading up to the decision—in fact for a number of months, and there is a whole series of correspondence and meetings [...]—we had been discussing with the Home Office what to do about a business that had a strategic plan submitted to the Home Office in April, which had not yet been signed off and which indicated some severe worries about the viability of the marketplace in which we operated. It certainly raised issues about the viability of the financing of the business and the impact of that marketplace on us. There had been continuous conversations, particularly when the new ministerial team took over, about the context in which we were operating. We had severe worries [...] about the marketplace, police procurement, developments and what turned out to be a very sudden collapse in the available work to the forensic suppliers.\(^{295}\)

217. Despite the “continuous conversations” between the FSS management and Home Office, the FSS’s written submission stated that “the announced closure of FSS has been a huge shock and disappointment to staff; and to the forensic science community in the UK and overseas.”\(^{296}\)

Prospect represents over 1,000 scientists employed by the FSS\(^{297}\) and Steve Thomas, Officer for the FSS, indicated that there had been a fruitless desire for better engagement with the Home Office:

We had written to the Minister in June last year, welcoming him to his post and seeking a meeting, because, obviously, we had been aware that there had been issues to do with the size of the forensic market and the impact that that was having on our members through restructuring and other initiatives for some time. So we were looking for an early meeting with him. We had a response, either in June or July, to say that the Minister looked forward to meeting us to talk to us about what our concerns were about the marketplace, among other things, and that he was looking forward to working with us. The first time we met the Minister—either myself or my predecessor, the previous negotiating officer—was two weeks ago, which was not

\(^{294}\) Q 2  
\(^{295}\) Q 3  
\(^{296}\) Ev 77, para 1  
\(^{297}\) Ev 65, para 1
only not in advance of the announcement but it was not even within months of the announcement. That was the first consultation we had with the Minister. 298

Mr Thomas told us that:

The first that the union was aware of the decision was on the day of the decision, on 14 December. There had been no consultation with us at all from the Minister. There had been no consultation or discussions with FSS management on it, so it came entirely as a shock both to us and to our members on the 14th. 299

218. Prospect’s written submission also expressed concerns over “the manner in which the decision was presented by the Minister”.300

219. We are pleased that the FSS appears to have had ongoing engagement with the new Government, but concerned that these discussions were limited to senior management and did not involve less senior staff and the trade unions. It is disappointing that the staff of the FSS should have been so disempowered and disengaged from the process.

220. When we asked the Minister whom the Home Office had consulted and what scientific advice had been sought, he responded that:

the issues and challenges that came up were, in many ways, of a commercial nature. Our discussions were focused on, obviously, the Association of Chief Police Officers, the NPIA and the policing sector. Equally, we did go out to the criminal justice sector to obtain their input in relation to the integrity of the criminal justice system. Obviously, the Home Office scientist, who has just given evidence to you, was notified in advance of the decision that was announced on 18 December.301

221. However, Dr Simon Bramble, Head of Police Science and Forensics at the NPIA told us that “the NPIA were not consulted over the decision to close the FSS directly. We did not have anything to do with the final decision.”302 The Government should clarify whether the NPIA was consulted on the decision to close the FSS before the decision was made, and when.

222. We are disappointed that the Home Office carried out minimal consultation before making its decision on the future of the FSS. There is a tangible difference between consulting before a decision has been made and consulting on transition arrangements after the decision has been made. It should not have been difficult for the Government to seek the views of key parties other than ACPO. With such limited consultation, and particularly the lack of scientific input, it is difficult for us to have confidence that the Government fully considered all available options for the future of the FSS and the likely impacts of its closure.
223. We have serious concerns about the role of the Chief Scientific Adviser (CSA) at the Home Office and the limited information on which the decision to close the FSS was based. We do not consider that the Government’s decision fully took into account the best evidence available and we are concerned that the CSA was disengaged from the decision-making process. We recommend that the Government Office for Science review whether there is a systemic problem with the Home Office’s use of scientific evidence in policy-making.

**Costs of closing the FSS**

224. The Home Office explained in its written submission that its “main priorities were to manage the risks to the CJS and to minimise the cost to the taxpayer”.

225. Supply Estimates are the means by which the Government seeks from Parliament funds and parliamentary authority for departmental expenditure each year. Spring Supplementary Estimates are the final opportunity for departments to seek changes in parliamentary authority for spending before the end of the financial year. The Home Office’s Spring Supplementary Estimates 2010–11, published in February 2011, show the changes to spend relating to the FSS.

**Table 5: Summary of figures in the Home Office Spring Supplementary Estimates 2010-11 relating to the Forensic Science Service**

<table>
<thead>
<tr>
<th>Reason for spend</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in programme (capital grants) to provide rescue aid to the FSS</td>
<td>£13 million</td>
</tr>
<tr>
<td>Drawdown of programme to write down loans made to the FSS</td>
<td>£12 million</td>
</tr>
<tr>
<td>Drawdown of programme to cover costs associated with the FSS transition</td>
<td>£3 million</td>
</tr>
<tr>
<td>Drawdown of programme (capital grants) to provide rescue aid to the FSS</td>
<td>£27 million</td>
</tr>
<tr>
<td>Total (excluding provisions for Crime and Policing Group)</td>
<td>£55 million</td>
</tr>
<tr>
<td>Increase in provisions for the Crime and Policing Group</td>
<td>£70 million</td>
</tr>
<tr>
<td>Total (including provisions for Crime and Policing Group)</td>
<td>£125 million</td>
</tr>
</tbody>
</table>

226. The Home Office had put in place Rescue Aid “to meet the necessary operating losses during the wind-down so as to support the provision of effective forensics during the transition process and avoid an uncontrolled administration”. The Minister elaborated that:

The rescue aid payments that have been made are, in essence, to cover the costs of stabilising the FSS and to manage the operational losses incurred during the period of the wind-down—they are very focused on those elements—and also to cover the costs of a round of voluntary exits associated with urgent structural measures to stem loss-making activities. That is where the rescue aid-type funding has been focused in relation to those payments.

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303 Ev 62, para 28
305 Ev 62, para 25
306 Q 307
227. The Minister explained that the £70 million increase in provisions for the Crime and Policing Group covered:

- a range of issues and elements, including potential redundancy costs, property costs, interest payments, project costs and pensions. Clearly, that is a provision and we would certainly be working very hard to reduce that number, given that a lot of this relates to commercial negotiations with contracted parties. That is very much a provision at this stage in relation to the estimated costs during 2011–12.  

228. Stephen Webb, Director of Finance in the Crime and Policing Group, Home Office, added that:

We took it as a prudent assessment of what we thought might be required. [There] are a number of areas where negotiations are going on—for example, with the trustees of the pension fund. It is hard to break it down precisely at the moment. We would certainly be looking to come in below that sum if at all possible.  

229. On 5 April, the Home Affairs Select Committee took oral evidence from Home Office officials on managing cuts to the Home Office’s budget. The Committee highlighted that winding up the FSS would cost £125 million in 2010–11, contrasted with the approximately £24 million costs of keeping it running (based on the quoted losses of £2 million a month). Helen Kilpatrick, Director General, Financial and Commercial Group at the Home Office, replied that:

Keeping it running though is not a viable option because the company would be trading insolvently, and the Rescue Aid Regulations wouldn’t enable us to carry on forever propping up a company that was trading insolvent, so something had to be done with it.  

230. The Government should clarify how costs associated with the FSS’s transition were originally calculated, particularly given that the transition process was, and remains, not fully known. If it emerges through the transition process that additional public money is required for the wind-down of the FSS, including from sources other than the Home Office, this information should be published with an explanation.  

231. The Government’s explanations of the £70 million increase in provisions for the Crime and Policing Group lacked detail. We request a full financial breakdown of the £70 million provisions as well as an update at the end of the financial year on how much the wind-down has actually cost the Government in total.
Alternatives to closure

232. When he appeared before us, the Minister explained that the FSS was a GovCo and therefore “subject to the Companies Act and various other legislative requirements”. As a consequence there were three options that had been considered by Government:

[The] first option was allowing it to go into administration, which we immediately discounted because of the impact that would have on the criminal justice system and our fundamental desire to ensure there was integrity within the criminal justice system.

The second option was some form of restructuring. In other words, to invest further to see whether there was a way of retaining the FSS in some form to be able to break even moving forward.

The third option was, obviously, a wind-down arrangement, which was our ultimate preferred option in terms of dealing with the situation and taking things forward.

The Home Office’s written submission expanded on the first option:

The most drastic option would have been to withdraw any further financial help, which may have led to the directors placing the company into administration early this year. An uncontrolled administration would have seriously damaged the forensic capacity available, and we were not prepared to expose the CJS to that level of risk.

233. We agree with the Government that allowing the FSS to go into administration would have been undesirable, not only for the criminal justice system, but the employees of the FSS too.

234. We have explored the reasons why restructuring would not have been a viable option in the context of a declining forensics market, in chapter 2. The Home Office’s view, in summary, was that:

Further restructuring the FSS for ultimate sale would have been extremely expensive and there would be no certainty of achieving a sustainable position or realising any value from the company at the conclusion of this. We had to take into account State Aid and competition law constraints and concluded that, in a declining market, the cost of further restructuring would be disproportionate.

235. We were curious whether changing the status of the FSS from GovCo to the originally intended public-private partnership (PPP) would provide a solution. When we asked Bill Griffiths, Chairman of the FSS, about this, he stated that:

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210 Q 298
211 As above.
212 Ev 62, para 29
213 Ev 62, para 30
at no stage since the move to GovCo, has the board of the FSS proposed a move to a private status. We would only have ever done that if that was on the basis of a stable, healthy marketplace and business, and we never got anywhere near that.\textsuperscript{314}

236. We then considered whether it would be feasible to change the FSS’s status to one that would remove the need for commercial viability. Having been, since 1991, an Executive Agency, Trading Fund and finally a Government-owned, Contractor-operated (GovCo) organisation that was originally intended to become a Public Private Partnership (PPP), we were aware that the FSS was no stranger to changes in status. The Minister’s response was that:

It is worth underlining some of the other constraints that exist, particularly around state aid and the state aid issues that prevail in relation to this, given that a semi-market has been established with around 40\% in the pure private sector and around 60\% residing with the FSS. Therefore, the Government has to act within that framework of state aid. It can’t simply continue to fund money on a pro tem-type basis. State aid requires us to look at a restructuring either to get to a break-even position or to some sort of liquidation position. Against that backdrop, seeking, perhaps, to nationalise it all over again was not an option that was attractive either from the commercial aspects that I have already talked to or, equally, the restrictions that exist around state aid.\textsuperscript{315}

237. It was suggested by some that the functions of the FSS could be split. This would essentially involve separation of the profit-making and non profit-making functions. Forensic Service Northern Ireland considered that:

A review of the FSS to assess which sections are viable business areas and which are of central importance to UK as a whole should be conducted. It is likely that any prospective buyer will bid for the most attractive assets within the FSS. This means that other non-profit making services will be redundant but these may be the very ones that are essential for dealing with major complex cases or with national security. These could be retained within a core FSS facility, which also acts as the national [forensic science] coordinator, rather than the NPIA, for R&D. They could also take back in-house the custodianship of the national DNA database, as the NPIA is dissolved.\textsuperscript{316}

Similarly, Sir Alec Jeffreys, Professor of Genetics, University of Leicester, recommended:

retaining the FSS but in a greatly altered and substantially downsized state. I would maximise the transfer of profitable activity to the private sector, and place the remaining FSS back under the direct control of the Home Office, removing its pernicious privatised status. The focus of activities would be (1) R&D, (2) training, (3) retention of broad expertise and appropriate facilities to allow complex casework to be undertaken, (4) an oversight, quality-control and regulatory function with respect to the private sector, and (5) an international role in establishing standards

\textsuperscript{314} Q 14
\textsuperscript{315} Q 302
\textsuperscript{316} Ev w77, para 3.5
and protocols. I would also like to see far better interfacing between FSS and academia, perhaps through relocation away from the Birmingham site.\textsuperscript{217}

238. As an alternative to closure, Forest Forensic Services recommended:

Maintain[ing] a smaller core cadre of senior scientist[s] to work with the Police, funded through central government allowing the FSS to coordinate R&D and contribute, coordinate and manage the more serious crimes alongside senior Police investigators.\textsuperscript{218}

**Final conclusions**

239. There are many factors to take into consideration when determining what has caused the dire financial position of the FSS. We consider the most significant factor to be the shrinking forensics market, driven by increasing police in-sourcing of forensic science and a forensic procurement framework that drove down prices and did not adequately recognise the value of complex forensic services.

240. The stabilisation of the external forensics market is now of crucial importance. For this to be achieved, the Government must do two things. First, further police in-sourcing of forensic science must be curbed. Second, the National Forensic Framework Agreement, and any successor framework, must be revised to reflect that some forensic science services cannot be commoditised easily into products and ensure that the true costs of forensic services are reimbursed to providers. Without stability through regulation, a properly competitive market cannot be realised. A shrinking market provides no incentive for further investment or growth from any forensic science provider. The success of forensic science providers and their willingness to invest further in forensic science will be threatened if action is not taken to stabilise the market.

241. The process whereby the Government reached a decision on the future of the FSS was taken on legal and commercial bases. If legal and commercial grounds were the only relevant considerations, the Government’s decision to close the FSS would be reasonable. However, it is clear that such a decision should not be taken on purely legal and commercial grounds.

242. The Government did not consider enough evidence in its decision-making. The impacts on research and development, on the capacity of private providers to absorb the FSS’s market share, on the future of the archives and on the wider impacts to the criminal justice system appear to have been hastily overlooked in favour of the financial bottom line. Examining the possible impacts of a decision after the decision has been made contradicts the concept of evidence informing policy.

243. Proper consideration should now be given to what resources might be irretrievably lost to the UK with the closure of the FSS, including the FSS’s archives and the

\textsuperscript{217} Ev 64, para 5(c)

\textsuperscript{218} Ev w50, para 5(c)
intellectual wealth residing within its scientists. We have seen no detailed plan outlining the transition and the future of the FSS’s staff, archives, work and assets.

244. While there would be merits in retaining the FSS as a completely public agency of the Home Office that focuses on R&D, training of forensic scientists, establishing quality standards and maintaining archives, we are not convinced that the separation of forensic science research and provision would necessarily be the ideal solution, because research efforts should feed into and improve service provision. In response to this report we ask for the views of the Government and Transition Board on this matter.

245. The transition deadline of March 2012 is extremely challenging and we are not confident that an orderly transition can be achieved by this date. The Government should extend this deadline by at least six months. Extending the transition deadline would enable the Government to consult on, and determine, what its wider strategy for forensic science should be. The FSS should be supported during this period. The FSS transition should be carefully monitored to ensure that it does not further contribute to market instability or lead to a diminution of service to the criminal justice system. Continuing to support the FSS during this period may add additional costs to the public purse, but we consider that it should be seen as a price worth paying.
Conclusions and recommendations

The forensics market

1. Given that the Government expected private forensic science providers (FSPs) to pick up the FSS’s 60% share of the external forensics market, it is disappointing that the Government does not appear to have gathered any market intelligence on the capacity and commercial willingness of private forensic science providers to take on the FSS’s work. (Paragraph 42)

2. The apparent lack of transparency over the size of the forensics market is unacceptable and we see no reason why the FSS and other forensic science providers should have been unaware of police forensic expenditure figures. The levels of police expenditure on internal and external forensics should have been published, and we recommend that they are published in detail in future. If the Government expects the private sector to pick up the FSS’s market share, it must be clear with private forensic science providers about the size of the market and anticipated future trends. (Paragraph 43)

3. The Minister’s lack of awareness that private FSPs have concerns about police expenditure on forensic science is worrying. The Government must now ensure that the views of private FSPs are sufficiently taken into account during the transition period; it runs the risk otherwise of having unrealistic expectations about what private FSPs can deliver in a shrinking market. (Paragraph 44)

4. In our view, collecting data on police expenditure is not at odds with enabling the police to have operational independence. We are concerned that neither ACPO nor the Home Office could provide us with the full cost of internal forensic science activities. We recommend that ACPO and the Home Office gather and publish data on the full police expenditure on internal forensic activities, including capital, training and skills, forensic testing and administration over the last five years, and continue to publish this information in future. If the Government’s policy of a market in forensic science services is to operate effectively, it is important that the full costs of internal forensic expenditure are fully and accurately reported. In addition, we consider that the statement given to Parliament on 14 December 2010 was inadequate as the information on police expenditure, on which it was based, was incomplete. (Paragraph 49)

5. Given the marked decrease in the external forensics market in 2010–11, it is reasonable to expect that the market may shrink to £110 million or less before 2015, particularly given that spending cuts have yet to bite on police budgets. While we agree with the Minister that it would be wrong to speculate, we recommend that the Government re-evaluates the future of the forensics market in light of the cuts to police budgets and planned withdrawal of the FSS from the market. (Paragraph 52)
National Forensic Framework Agreement

6. It is our understanding that some areas of forensic science provision, particularly complex, interpretive analyses, are not profitable under the current procurement strategy, although this does not make them less important to criminal justice. In considering the proposed closure of the FSS and development of a future procurement strategy, the Government must recognise and address this issue. (Paragraph 62)

7. The risks of fragmentation cannot be managed if the extent of fragmentation and the reasons for it are unknown. It is the responsibility of the police to monitor whether fragmentation, whereby crime exhibits from the same crime are sent to different FSPs, has been occurring. ACPO and the NPIA (or its successor) should conduct a survey of police forces to determine the extent to which fragmentation has occurred under the National Forensic Framework Agreement, and reasons for any fragmentation. This should be fed into future forensic procurement frameworks and continually monitored. (Paragraph 68)

8. The expiration of the current procurement strategy provides an ideal opportunity for the NPIA, ACPO and the Home Office to review the successes and failures of the National Forensic Framework Agreement. We recommend that the following questions are answered and resolved: (i) whether all forensic services, particularly complex interpretations, are adequately valued; and (ii) whether the procurement strategy has encouraged fragmentation of casework. (Paragraph 72)

Financial position of the FSS

9. The Government announcement that the FSS was losing £2 million a month was not the full story. It should have been made clear that (i) the figure did not take into account the savings expected to be delivered by the transformation programme; (ii) it did not account for potential further declines in business; and (iii) while some monthly losses may have been £2 million, the average monthly loss over the past year was lower. As a result, evaluation of the proposal to close the FSS from the taxpayer's perspective was difficult. (Paragraph 80)

10. We are dismayed that the FSS was not privy to information on the forensics market. There has clearly been a persistent failure to communicate information to the FSS about the market environment in which it was expected to find a way to thrive. The PwC report on the state of the forensics marketplace and figures on police expenditure should have been available. (Paragraph 86)

11. If the Government wants a competitive market in forensic services it must ensure that the market is not distorted by the police customer increasingly becoming the competitor. Otherwise the ambition for a truly competitive market is fundamentally undermined. We consider that the Government’s ambitions for fully privatised forensic science provision are jeopardised by its complacent attitude towards police forensic expenditure. (Paragraph 91)

12. We are concerned that there are no measures in place to curb further in-sourcing. We recommend that the Government introduce measures to ensure that the police
do not further in-source forensic science services that are already available from external providers through the National Forensic Framework Agreement. Regulations should apply to any successor frameworks. We disagree with the Minister that the FSS transition period may not be the right time to put these measures in place – given the fragility and uncertain future of the market it is the ideal time to do this. (Paragraph 92)

**Quality standards and impartiality**

13. In the transition period to 2012, the Government must ensure that none of the FSS’s work is transferred to a private forensic science provider that has not achieved accreditation to ISO 17025. (Paragraph 100)

14. We have serious concerns about the potential transfer of the FSS’s work to non-accredited police laboratories. We agree with the FSR that the transfer of work from the FSS to a non-accredited police environment would be highly undesirable, as this would pose significant and unacceptable risks to criminal justice. If a sufficient match in quality standards cannot be met elsewhere, the Government should, at the least, reconsider the 2012 closure deadline. The needs of criminal justice must come before considerations of financial convenience. (Paragraph 109)

15. We have seen no evidence to suggest that private forensic science providers would be less impartial than the FSS, but they must be accredited to at least the same standards. (Paragraph 114)

16. No quality standard or code of conduct can guarantee impartiality. However, we consider that adherence to ISO 17025 and the Codes of Conduct being developed by the Forensic Science Regulator would be a good place for police forensic laboratories to start. Compliance with ISO 17025 is already planned, albeit on a generous timetable. We recommend that existing police forensic labs also commit to the FSR’s Codes of Conduct. (Paragraph 123)

17. We agree that a nebulous fear or perception of impartiality is insufficient reason to condemn police in-sourcing of forensics, although the perception of impartiality is crucial to the courts and public confidence in the criminal justice system. However, given that so few police forensic laboratories have been accredited to ISO 17025, a standard that demands a level of impartiality, we must express concerns about the risks to impartiality of forensic evidence produced by non-accredited police laboratories. We reiterate our previous recommendation that if the FSS closes, transfer of work from the FSS to a non-accredited police environment would be highly undesirable. (Paragraph 124)

18. The introduction of bias based on selective forensic examination of exhibits, arising from the need to make savings is a different risk. We are concerned that the risk may be exacerbated by recent cuts to police budgets and we urge the Government to monitor the situation. Police forces must work closely with forensic science providers to ensure that any selectivity is scientifically justified. (Paragraph 125)
The Forensic Science Regulator

19. The Forensic Science Regulator (FSR) has a crucial role in ensuring high quality standards are maintained, and this role will become more important during the transition period. It is time for the Forensic Science Regulator to have statutory powers to enforce compliance with the quality standards and Codes of Conduct that he has developed through what appears to be a robust process. The Government should bring forward proposals to provide the FSR with statutory powers immediately. (Paragraph 129)

20. It is unacceptable that the Home Office failed to consult with the Forensic Science Regulator when considering the future of the FSS, as he was a key stakeholder who could have offered a useful, independent perspective. (Paragraph 131)

FSS work, staff and archives

21. We are deeply concerned about the practicalities of transferring the FSS’s work and staff to other FSPs by the transition deadline of March 2012. The FSS Transition Board must ensure that, whatever the outcome, forensic scientists employed by the FSS are retained within the profession and within the UK to the benefit of the criminal justice system. Transfer of staff to other forensic science providers must be conducted under TUPE regulations and in addition, care is needed to ensure that pension provision is adequately protected. (Paragraph 146)

22. We cannot see any benefits to breaking up the FSS’s archives, including case files, retained materials, research and validation papers and the intellectual capability supporting the archive. Whatever the future of the FSS, the existing archives must physically remain as a single, accessible resource, supported by suitably qualified and experienced experts. This would be in the interests of the criminal justice system. (Paragraph 159)

23. There may be benefits in developing the FSS’s archives further into a comprehensive national resource. The custodianship of the archives should be agreed in the context of the NPIA’s wind-down as well as the FSS transition. We recommend that private FSPs contribute suitable documents and materials to what we would term the “National Forensic Archives”. (Paragraph 160)

24. Section 17 of the Criminal Appeal Act in 1995 may have been sufficient to enable the Criminal Cases Review Commission (CCRC) to obtain materials when the FSS, as a public body, was the main provider of forensic services to police forces. Although this appears not to have been a problem to date, the increasing penetration of private FSPs into the forensics marketplace means the CCRC’s statutory powers are becoming increasingly ineffectual. Whatever the future of the FSS, we recommend the Government consider extending the powers of the CCRC to obtain materials from private forensic science providers. (Paragraph 165)
Forensic science research and development

25. A Departmental Chief Scientific Adviser (CSA) has unique independence and is therefore, rightly, expected to provide a crucial challenge function to the Department. It may not be within the CSA’s remit to advise on legal and commercial matters, but it is certainly within his remit to advise on scientific matters relating to the closure of the FSS, a Home Office-funded centre of scientific excellence. We consider the CSA’s satisfaction with his exclusion from the decision-making process and his failure to challenge the decision to be unacceptable. This is a further demonstration of the ongoing weak scientific culture in the Home Office. (Paragraph 171)

26. We are concerned that no formal assessment was made of the impact of closing down the FSS on forensic science R&D before the decision was made and announced. We have not seen any evidence of an informal assessment. We are very concerned and disappointed that the Chief Scientific Adviser to the Home Office was not consulted prior to the decision to wind down the FSS. (Paragraph 175)

27. We were given various reasons for the timing of the Home Office Review of R&D. The Chief Scientific Adviser implied that one reason may have been a preservation of confidentiality and that the Review may have been prompted by the attention drawn by the closure of the FSS. The Minister told us that a lack of time was the driver. The reasons for the timing should be clarified. (Paragraph 176)

28. The relationship between recommendations made by the Home Office Review of R&D and the work of the FSS Transition Board, set up to oversee the wind-down of the FSS, must be made clear. (Paragraph 177)

29. Although private FSPs invest in R&D, it is probably unreasonable to expect private companies to increase their investment in some areas of forensic science research, particularly in fundamental research, at a time of market uncertainty. Private companies do, however, have a key role to play in development and application of research and ongoing validation of methods. (Paragraph 194)

30. Although we are hesitant to call for increased research funding in the current economic climate, the case for increased public funding specifically for forensic science research is compelling. We consider that the Home Office and Research Councils have an interest in the health of the forensic science research base and should develop a new national research budget for forensic science. The views of the forensic science community should be sought when determining the size and scope of the budget and details of its administration. (Paragraph 195)

31. The FSS appears to have worked in a manner that was not conducive to collaboration and coordination of research efforts. The pressure to act as a commercial organisation appears to have been a key factor. (Paragraph 200)

32. Coordination and collaborations leading to exchange of knowledge are vital to the health of any scientific discipline. We expect that the Home Office Review of R&D will examine this matter in more detail and that it will bring forward detailed recommendations on this. (Paragraph 201)
33. Although we acknowledge the difficulties in tracking the movements of scientists in the UK and abroad, it is important that the impact of the FSS’s closure on its forensic scientists is monitored. The FSS and Government should ensure that the first destination of all forensic scientists that are made redundant or leave the FSS as a result of the proposed wind down are recorded. We request an update on this matter by June 2012. (Paragraph 207)

The decision to close the FSS

34. We must state our disappointment at the historical inadequacies in government decision-making that brought the FSS to its current dire financial situation. While we have been critical of the current Government’s actions, it must be put on record that we consider much of the responsibility for the current problems facing the FSS to lie with previous administrations. The changes made to the FSS since it became an Executive Agency in 1991, coupled with a subsequent lack of Government understanding of the nature of the growing forensics market, meant that problems inevitably arose. (Paragraph 208)

35. It appears that the Attorney General was first engaged only through the clearance processes, that is, the process by which Government-wide confirmation was obtained, after the initial decision had been made by the Home Office to wind down the FSS. We are surprised that the Director of Public Prosecutions, the head of the CPS, was not directly consulted. The Criminal Cases Review Commission does not appear to have been involved at all. This is unsatisfactory and unjustifiable given the impact the closure of the FSS could have on the work of the criminal justice system. It should not need to be stated that forensic science is a service for criminal justice, not just policing. (Paragraph 215)

36. We are pleased that the FSS appears to have had ongoing engagement with the new Government, but concerned that these discussions were limited to senior management and did not involve less senior staff and the trade unions. It is disappointing that the staff of the FSS should have been so disempowered and disengaged from the process. (Paragraph 219)

37. The Government should clarify whether the NPIA was consulted on the decision to close the FSS before the decision was made, and when. (Paragraph 221)

38. We are disappointed that the Home Office carried out minimal consultation before making its decision on the future of the FSS. There is a tangible difference between consulting before a decision has been made and consulting on transition arrangements after the decision has been made. It should not have been difficult for the Government to seek the views of key parties other than ACPO. With such limited consultation, and particularly the lack of scientific input, it is difficult for us to have confidence that the Government fully considered all available options for the future of the FSS and the likely impacts of its closure. (Paragraph 222)

39. We have serious concerns about the role of the Chief Scientific Adviser (CSA) at the Home Office and the limited information on which the decision to close the FSS was based. We do not consider that the Government’s decision fully took into account
the best evidence available and we are concerned that the CSA was disengaged from the decision-making process. We recommend that the Government Office for Science review whether there is a systemic problem with the Home Office's use of scientific evidence in policy-making. (Paragraph 223)

Costs of closing the FSS

40. The Government should clarify how costs associated with the FSS’s transition were originally calculated, particularly given that the transition process was, and remains, not fully known. If it emerges through the transition process that additional public money is required for the wind-down of the FSS, including from sources other than the Home Office, this information should be published with an explanation. (Paragraph 230)

41. The Government’s explanations of the £70 million increase in provisions for the Crime and Policing Group lacked detail. We request a full financial breakdown of the £70 million provisions as well as an update at the end of the financial year on how much the wind-down has actually cost the Government in total. (Paragraph 231)

Alternatives to closure

42. We agree with the Government that allowing the FSS to go into administration would have been undesirable, not only for the criminal justice system, but the employees of the FSS too. (Paragraph 233)

Final conclusions

43. There are many factors to take into consideration when determining what has caused the dire financial position of the FSS. We consider the most significant factor to be the shrinking forensics market, driven by increasing police in-sourcing of forensic science and a forensic procurement framework that drove down prices and did not adequately recognise the value of complex forensic services. (Paragraph 239)

44. The stabilisation of the external forensics market is now of crucial importance. For this to be achieved, the Government must do two things. First, further police in-sourcing of forensic science must be curbed. Second, the National Forensic Framework Agreement, and any successor framework, must be revised to reflect that some forensic science services cannot be commoditised easily into products and ensure that the true costs of forensic services are reimbursed to providers. Without stability through regulation, a properly competitive market cannot be realised. A shrinking market provides no incentive for further investment or growth from any forensic science provider. The success of forensic science providers and their willingness to invest further in forensic science will be threatened if action is not taken to stabilise the market. (Paragraph 240)

45. The process whereby the Government reached a decision on the future of the FSS was taken on legal and commercial bases. If legal and commercial grounds were the only relevant considerations, the Government’s decision to close the FSS would be
reasonable. However, it is clear that such a decision should not be taken on purely legal and commercial grounds. (Paragraph 241)

46. The Government did not consider enough evidence in its decision-making. The impacts on research and development, on the capacity of private providers to absorb the FSS’s market share, on the future of the archives and on the wider impacts to the criminal justice system appear to have been hastily overlooked in favour of the financial bottom line. Examining the possible impacts of a decision after the decision has been made contradicts the concept of evidence informing policy. (Paragraph 242)

47. Proper consideration should now be given to what resources might be irretrievably lost to the UK with the closure of the FSS, including the FSS’s archives and the intellectual wealth residing within its scientists. We have seen no detailed plan outlining the transition and the future of the FSS’s staff, archives, work and assets. (Paragraph 243)

48. While there would be merits in retaining the FSS as a completely public agency of the Home Office that focuses on R&D, training of forensic scientists, establishing quality standards and maintaining archives, we are not convinced that the separation of forensic science research and provision would necessarily be the ideal solution, because research efforts should feed into and improve service provision. In response to this report we ask for the views of the Government and Transition Board on this matter. (Paragraph 244)

49. The transition deadline of March 2012 is extremely challenging and we are not confident that an orderly transition can be achieved by this date. The Government should extend this deadline by at least six months. Extending the transition deadline would enable the Government to consult on, and determine, what its wider strategy for forensic science should be. The FSS should be supported during this period. The FSS transition should be carefully monitored to ensure that it does not further contribute to market instability or lead to a diminution of service to the criminal justice system. Continuing to support the FSS during this period may add additional costs to the public purse, but we consider that it should be seen as a price worth paying. (Paragraph 245)
Annex

**Glossary**

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<tr>
<td>ACPO</td>
<td>Association of Chief Police Officers</td>
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<td>CCRC</td>
<td>Criminal Cases Review Commission</td>
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<td>CCTV</td>
<td>closed circuit television</td>
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<tr>
<td>CIPFA</td>
<td>Chartered Institute of Public Finance and Accountancy</td>
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<tr>
<td>CJS</td>
<td>criminal justice system</td>
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<td>CPS</td>
<td>Crown Prosecution Service</td>
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<td>CSA</td>
<td>Chief Scientific Adviser</td>
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<td>DNA</td>
<td>Deoxyribonucleic acid</td>
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<td>FSNI</td>
<td>Forensic Science Northern Ireland</td>
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<td>FSP</td>
<td>forensic science/service provider</td>
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<td>FSR</td>
<td>Forensic Science Regulator</td>
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<td>FSS</td>
<td>Forensic Science Service</td>
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<td>GMP</td>
<td>Greater Manchester Police</td>
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<td>GO Science</td>
<td>Government Office for Science</td>
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<td>GovCo/GoCo</td>
<td>Government owned, contractor operated</td>
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<td>HMIC</td>
<td>Her Majesty’s Inspectorate of Constabulary</td>
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<td>IP</td>
<td>intellectual property</td>
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<tr>
<td>ISO</td>
<td>International Organization for Standardization (international acronym)</td>
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<tr>
<td>LGC</td>
<td>Formerly the Laboratory of the Government Chemist, now known as LGC</td>
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<tr>
<td>MOJ</td>
<td>Ministry of Justice</td>
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<td>MPS</td>
<td>Metropolitan Police Service</td>
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<td>NFFA</td>
<td>National Forensic Framework Agreement</td>
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<td>NPIA</td>
<td>National Policing Improvement Agency</td>
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<td>PPP</td>
<td>Public Private Partnership</td>
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<td>PwC</td>
<td>PricewaterhouseCoopers</td>
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<tr>
<td>R&amp;D</td>
<td>research and development</td>
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<td>RCUK</td>
<td>Research Councils UK</td>
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<td>SOCA</td>
<td>Serious Organised Crime Agency</td>
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<td>TUPE</td>
<td>Transfer of Undertakings (Protection of Employment) Regulations</td>
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<td>UKAS</td>
<td>UK Accreditation Service</td>
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Formal Minutes

Wednesday 22 June 2011

Members present:

Andrew Miller, in the Chair

Gavin Barwell
Stephen Metcalfe
David Morris
Graham Stringer
Roger Williams

The Committee considered this matter.

Draft Report (The Forensic Science Service), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 245 read and agreed to.

Annex and Summary agreed to.

Resolved, That the Report be the Seventh Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for placing in the Library and Parliamentary Archives.

[Adjourned till Wednesday 29 June at 9.00 am]
Witnesses

Wednesday 23 March 2011

Bill Griffiths, Chairman, Forensic Science Service, Dr Gillian Tully, Research and Development Manager, Forensic Science Service, and Steve Thomas, Officer for Forensic Science Service, Prospect Union

Wednesday 30 March 2011

Professor Jim Fraser, Director, Centre for Forensic Science, University of Strathclyde, David Hartshorne, Commercial Director, Cellmark Forensic Services, Professor Sir Alec Jeffreys, Professor of Genetics, University of Leicester, and David Richardson, Chief Executive, LGC

Dr Simon Bramble, Head of Police Science and Forensics, National Policing Improvement Agency, Roger Coe-Salazar, Chief Crown Prosecutor, Crown Prosecution Service, Gary Pugh, Director of Forensic Services, Metropolitan Police Service, and Chief Constable Chris Sims, Association of Chief Police Officers

Wednesday 27 April 2011

Professor Bernard Silverman, Chief Scientific Adviser, Home Office, and Andrew Rennison, Forensic Science Regulator


List of printed written evidence

1. Home Office (FSS 00 and 00a) Ev 60, Ev 63
2. Professor Sir Alec Jeffreys (FSS 16) Ev 63
3. Prospect (FSS 29) Ev 65
4. LGC Forensics (FSS 63) Ev 69
5. Cellmark Forensic Services (FSS 73) Ev 72
6. Forensic Science Regulator (FSS 76) Ev 74
7. Forensic Science Service (FSS 87, 87a, 87b, 87c and 87d) Ev 77, Ev 83, Ev 84, Ev 84, Ev 99
9. Gary Pugh (FSS 90) Ev 101
10. University of Strathclyde (FSS 91) Ev 104
11. National Policing Improvement Agency (FSS 96) Ev 106
List of additional written evidence

(published in Volume II on the Committee’s website www.parliament.uk/science)

1. Professor Brian Caddy (FSS 01)  
2. Dr Peter Dean (FSS 02)  
3. Allan McCullagh (FSS 03)  
4. Geoffrey Hanson (FSS 04)  
5. Mrs Jennifer Button (FSS 05)  
6. Justin Scott (FSS 06)  
7. Andrea Grout (FSS 07)  
8. John Millington (FSS 08)  
9. Mrs Marylyn Godber (FSS 09)  
10. Alan Calverd (FSS 10)  
11. W Folkard (FSS 11)  
12. John Haley (FSS 12)  
13. G Burton (FSS 13)  
14. Mrs Carol Hannam (FSS 14)  
15. Mr Roderick Hannam (FSS 15)  
16. Dr Denise Syndercombe Court (FSS 17)  
17. Graham Owen (FSS 18)  
18. Professor Peter Gill (FSS 19 and 19a)  
19. Andrew Meaby (FSS 20)  
20. Dr Fiona Perry (FSS 21)  
21. Natural History Museum (FSS 22)  
22. FSS Firearms Units Staff (FSS 23)  
23. Professor Ronald C Denney (FSS 24)  
24. David Baldwin (FSS 25)  
25. Amanda Meaby (FSS 26)  
26. Mike Chan (FSS 27)  
27. Pat Best (FSS 28)  
28. Edward Braxton Reynolds (FSS 30)  
29. Dr S P Day (FSS 31)  
30. Forest Forensic Services (FSS 32)  
31. Antonio Queenan (FSS 33)  
32. David Sawney (FSS 34)  
33. Claire Franklin (FSS 35)  
34. D J X Halliday (FSS 36)  
35. Andrea Stanton (FSS 37)  
36. Peter S B Minty (FSS 38)  
38. Deborah Weeks (FSS 40)  
39. Peter Grant (FSS 41)  
40. FSS London Toxicology Team (FSS 42)  
41. Mrs Florence Heap (FSS 43)
42 S J Griffith (FSS 44) Ev w70
43 Key Forensic Services Ltd (FSS 45) Ev w71
44 Forensic Science Northern Ireland (FSS 46) Ev w74
45 Anne Chapman-Damms (FSS 47) Ev w77
46 Gemma Escott, Elizabeth Harris, Nicola Taylor and Michelle Walton (FSS 48) Ev w78
47 Miss Sammy Warnakulasuriya (FSS 49) Ev w81
48 Dr Richard J C Barron (FSS 50) Ev w82
49 Mrs Hilary Kingston (FSS 51) Ev w84
50 Dr Susan Pope (FSS 52) Ev w85
51 Emma Wilson (FSS 53) Ev w87
52 S Hearsum (FSS 54) Ev w88
53 Lisa Webb-Salter (FSS 55) Ev w89
54 Dr S R Baker (FSS 56) Ev w93
55 Colin Osmond (FSS 57) Ev w96
56 Ian Parkinson (FSS 58) Ev w98
57 Jeffrey Gray and Sara Gray (FSS 59) Ev w101
58 Neville Isles and Lynn Bower (FSS 60) Ev w104
59 Dr Kevin Sullivan (FSS 61) Ev w107
60 Robert Green (FSS 62) Ev w111
61 Abigail Snasdell (FSS 64) Ev w117
62 The Forensic Institute (FSS 65) Ev w120
63 Ian Kirkwood (FSS 67) Ev w124
64 Dr S M Willis (FSS 68) Ev w125
65 British Medical Association (FSS 69) Ev w127
66 Northumbria University Centre for Forensic Science (FSS 70) Ev w128
67 Statistics and Interpretation Group, Research and Development Department, Forensic Science Service (FSS 71) Ev w131
68 Katy Rowe and Laura Davis (FSS 72) Ev w132
69 Terry Kent (FSS 74) Ev w135
70 The Biochemical Society (FSS 75) Ev w138
71 Mike Silverman (FSS 77) Ev w139
72 Shailes Jagatiya (FSS 78) Ev w140
73 Centre for Forensic Investigation, Teesside University (FSS 79 and 79a) Ev w143, Ev w145
74 FSS Gunshot Residue Staff (FSS 80) Ev w145
75 Axiom International Limited (FSS 81) Ev w147
76 Professor T J Wilson, Northumbria University Centre for Forensic Science (FSS 82) Ev w151
77 Criminal Cases Review Commission (FSS 83) Ev w155
78 Catherine Turner and Orlando Elmhirst (FSS 84) Ev w158
79 Forensic Science Society (FSS 85) Ev w163
80 Faculty of Forensic and Legal Medicine of the Royal College of Physicians of London (FSS 86) Ev w164
81 Royal Society of Chemistry (FSS 88) Ev w164
82 Research Councils UK (FSS 92) Ev w166
83 GeneWatch UK (FSS 93) Ev w168
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## List of Reports from the Committee during the current Parliament

The reference number of the Government’s response to each Report is printed in brackets after the HC printing number.

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Oral evidence

Taken before the Science and Technology Committee on Wednesday 23 March 2011

Members present:
Andrew Miller (Chair)
Gavin Barwell
Stephen McPartland
Stephen Metcalfe
David Morris
Stephen Mosley
Pamela Nash
Graham Stringer
Roger Williams

Examination of Witnesses


Q1 Chair: May I welcome the panel here this morning? As you know, we paid a visit to the laboratory in Lambeth yesterday. I would like to put on record my thanks on behalf of the Committee for the very informative visit we had. I notice, apart from Dr Tully, that some of the other people that we met yesterday are also in the room. Thank you very much not just for a very informative visit but for being frank and open with us.

Today, we will try to put on the record formally the answers to some of the questions we were exploring with you informally yesterday, but, before I start the questioning, I would be grateful if the panelists would formally introduce themselves.

Bill Griffiths: Thank you very much. I am Bill Griffiths, chair of the Forensic Science Service. I have been chair of the GovCo since 2005. I was chair of the Trading Fund just before, in the preparatory stage towards that project. I have seen the FSS continuously from that period to today. I am very pleased to be here to have a chance to inform the Committee of what is happening. In doing so, we will turn to how the situation arose and what the challenges are that we now have.

I am also acutely aware, as we sit here, that, back at our laboratories, we have 1,400 staff who are, currently, most uncertain about the future and under the extreme pressure of keeping the business going. Continuity is everything for us. They have been absolutely marvellous in sustaining their professionalism. I am sure that you may have some of that yesterday. I feel we should acknowledge that as we are here today and wish them well. Thank you.

Dr Tully: I am Gill Tully. I am head of research and development for the Forensic Science Service. I have about 20 years’ experience in forensic science, both from the research and the operational practitioner point of view.

Steve Thomas: Good morning. My name is Steve Thomas. I am a negotiating officer for Prospect, which is the union that represents the majority of employees of the Forensic Science Service. I have been the negotiating officer for Prospect on this particular patch, working with the branch members for the last six months. I want to echo some of the comments that Bill has made about the impact that this situation is having on the staff and their passion for and commitment to the roles that they are performing. We welcome the Select Committee and want to play a full role in supporting it.

Q2 Chair: Thank you very much. First of all, when did FSS management and staff find out that the Government planned to close the service? Were the company and the union consulted by the Government in any way beforehand? We want to be very precise about this and we would be grateful if you would give names and dates as precisely as you can.

Bill Griffiths: Let’s go right to the formality of the decision first. I would like to paint a picture of the lead-up to that in terms of the dialogue between ourselves and the Home Office. The final notification to us was on 25 November 2010. We had a meeting with the Minister and we were formally told what the decision was. We had a board meeting the following day, which was a Friday, and we met as a senior management team on the Saturday to do some preparation. The actual announcement came out, of course, on 14 December, and that was the time that the business in general and the staff were told. We were under an embargo not to announce the detail until the statement had been prepared. It took a little longer for the statement to be made than we anticipated—in other words, the difference between the end of November and 14 December—and I suspect that was due to parliamentary business.

Q3 Chair: Was that embargo from the Minister or from a civil servant?

Bill Griffiths: We were asked at the meeting with the Minister and the civil servants to hold off in making an announcement to the business in general until we had had the detail of the announcement. We did the preparatory work and we were ready, on standby, to make the appropriate announcements to all our staff when we had the detail.

That sounds out of context in a way, because in the period leading up to the decision—in fact for a number of months, and there is a whole series of
Q4 Chair: Can I just stop you there? I am going to call on you in a moment, Mr Thomas. I want to go back. You have been very precise and you have some figures that indicate concerns going back some time, but in your submission you say that you were not "sighted on the final estimates used in reaching the closure decision." Can you explain that, please?

Bill Griffiths: Yes. The critical element of us going to a GovCo back in 2005 was a need to change the way we operate, which we undertook enthusiastically, and the possibility that the marketplace which had other competitors in it would reform, there would be procurement and a marketplace in which the suppliers could thrive, including ourselves. It was apparent, even in 2008, three years later, that this marketplace was not reforming and turning out as we had expected, so we raised these concerns and asked for a formal market review to be undertaken. We asked for that a number of times. We wanted to know what kind of a market it was and how big it was so that our plans could be formulated to address that. So, in the submission of the plan we put in in April 2010, we said that we were not sighted on how big this market is, how it will develop and so on. Therefore, the plan could only be as good as the assumptions we had made and we said that we would like those assumptions to be validated. We did not get any formal validation for the market. We wanted an external, broad, independent review. We did not get that. We were unsighted, other than the trend of submissions that we got into the business.

Q5 Chair: Had you been sighted, what would you have said to the Government?

Bill Griffiths: It would have shown following the transformation of our business—in other words, the closure of some labs and the changes in the ways of working—whether that would have been a stable platform to deal with the market changes or whether we would have to do other things, be it further restructuring or whatever. We also didn’t know what plans there were for in-sourcing of work, which had normally been part of the external forensic supply market, or how in-sourcing was going to play out because that would, essentially, take revenues out of the market and the work would be done by the police. We were genuinely unsighted, but the level of decline in this current year, from about the time we submitted the plan in April, has been very severe. It is of the order of 20% plus, and it was more severe in the second six months than the first six months. We had a very unstable situation throughout the period up to the decision.

I don’t know what detailed information was available to the officials when they were preparing the case for the eventual announcement. We know some work was done by Pricewaterhouse. We did not see that until February, but, in itself, it may not have been the only piece of information that was available. I am not sighted on the whole lot.

Q6 Chair: Mr Thomas, would you like to comment from the point of view of the staff?

Steve Thomas: Yes. I wanted to respond to the question on consultation and so forth. The first that the union was aware of the decision was on the day of the decision, on 14 December. There had been no consultation with us at all from the Minister. There had been no consultation or discussions with FSS management on it, so it came entirely as a shock both to us and to our members on the 14th.

We had written to the Minister in June last year, welcoming him to his post and seeking a meeting, because, obviously, we had been aware that there had been issues to do with the size of the forensic market and the impact that that was having on our members through restructuring and other initiatives for some time. So we were looking for an early meeting with him. We had a response, either in June or July, to say that the Minister looked forward to meeting us to talk to us about what our concerns were about the marketplace, among other things, and that he was looking forward to working with us.

The first time we met the Minister—either myself or my predecessor, the previous negotiating officer—was two weeks ago, which was not only not in advance of the announcement but it was not even within months of the announcement. That was the first consultation we had with the Minister. Subsequent to the announcements, we have had consultations with the Forensic Science Service senior management to look for answers and responses to the plans and the effect that they would have on our members. All those questions are still outstanding.

Q7 Chair: Thank you for that. Just as an aside, it would be helpful to the Committee if you could provide us with copies of that exchange of correspondence.

Steve Thomas: Sure.

Q8 Chair: Turning back to you, Mr Griffiths, how would you describe your relationship with the Home Office in respect of the autonomy of the service and the influence you had over decision making in the process?
**Bill Griffiths:** The formalities of the relationship are that the Forensic Science Service is a legal entity. It has a board of directors with legal responsibilities and a governance structure which fully reflects that. We prepare business plans, they give us a mandate and we conduct activities in the business in line with that mandate and through governance committees on specialist subjects. The operation of that structure has gone very well. The critical matter for us is the content of the mandate in the strategic business plan, which we normally refresh every one or two years.

The frustration for us has been that there are factors in this marketplace which we could not know about. We were frustrated, I think, to some extent that we could not get more insight. I will mention just two factors. The procurement activities that were launched at GovCo in 2005 and the cycle of tenders that the various police forces engaged in set off too slowly. It was very complex and it was biased towards commodity supply. We do a number of things that could be classed as “commodities” in the sense that there are a number of suppliers who do them and they are not unique to us. DNA testing might be one of those.

That cycle of tenders is still not finished, and here we are, a good five years after GovCo. It was necessary for that to get under way, because, to reorganise the business, to make it efficient and correctly sized, that could only happen when the tender cycles were implemented because we were the incumbent large supplier. We are dedicated to continuity of supply; so our reform could only wait until the demand was recalibrated. We were frustrated by the speed, the complexity and the focus of the procurement. That made it very difficult.

As far as looking forward is concerned, the forward look is also in the hands of the customers. They know what they are going to spend, they know individually what they might spend it on and they know the extent to which they are or are not planning the in-sourcing. We were always trying to get as good a set of information on that as we could on which we could base our plans.

In 2008, we launched what we called the “Transformation”, which was the downsizing and changes in ways of working of the business. First, it went very well and, secondly, it was based on some good known information. That was in 2008, which was three years or two and a half years after we went to GovCo. There was a little bit of catch-up and we wanted as much assistance as we could to see clearly, because we were dedicated to resizing the business to be the right business, to be stable. Frankly, we welcome a stable base of competitors who are healthy, innovative and so on. The relationship and the contacts were good, but we were missing some vital pieces of information throughout, which, obviously, coloured the quality of the plans that we had.

**Q9 Chair:** Just for clarity, you used the word “customer” there. When we were talking to your staff yesterday, this matter came up and we asked one or two people who their customer is. One of the most interesting responses was, “The jury is the customer.” Shouldn’t that be the philosophy behind forensic science?

**Bill Griffiths:** I think it is very much the philosophy. The serving of the criminal justice system in general, and, in particular, presenting clear and authoritative evidence in court, is absolutely in the bloodstream of our organisation. It is a very good answer and an appropriate one to pinpoint the culture and the expertise of what we do and the dedication to it. But the reality is that we have commercial tenders that generate the business now that we win. Those commercial tenders, which are from police authorities through police forces, are another way of describing “the customer”.

**Chair:** Right. That leads us on to the structure of the business.

**Q10 Stephen McPartland:** I would like to go back in time a little. Do you consider that the Forensic Science Service should ever have moved away from being an executive agency towards a more commercial way of working?

**Bill Griffiths:** At the time when the proposal to move to a GovCo was contemplated, the McFarland review said it was a good idea for a couple of reasons. One was that there had already been the introduction of competitors into the marketplace. We were disadvantaged, to some extent, in comparison with those competitors because we had constraints as a trading fund executive agency that they did not have. There was a wish to encourage innovation and creativity to bring new technologies and methods into a marketplace. It was felt, therefore, that changing our status would be beneficial. We were enthusiasts for the change of status in line with the objectives of freedoms, bringing in innovation and making sure that the broader base of forensic suppliers was improved and enhanced so that there was a good supply base. Unfortunately, as I have said, the market reform did not happen. There has been hardly any appetite for innovation since 2005. We found it very difficult to get innovative processes accepted. Indeed, there is no real elegant process now to get innovation scrutinised and valued. Our suppliers are fragmented. Their general profitability is probably not as good as might have been expected if the market had developed. We set off with very clear aims, based on a decision that we did not make, of course, but of which we could see the logic. We tried very hard to make the best of that. We are where we are now and it is completely different from what we expected when we set off.

**Q11 Stephen McPartland:** Steve, were Prospect enthusiastic?

**Steve Thomas:** Absolutely not at the time. Some of those who were involved in the representations that we made to the House and elsewhere are in the room today. Prospect’s view was that embarking on this course was a dangerous one. In part, as you guys will have seen, having met some of our members yesterday, we were very concerned about commoditising forensic science and looking to secure a profit in a market that was not developed and in which there was only one main customer. We were concerned about the effect that it would have on the
criminal justice system. Obviously, we were concerned about the effect that it would have on our members. For the last 18 months or so, we have seen three main sites of the Forensic Science Service close, one of which is closing at the end of this week.

We saw that there would be issues about it. We were concerned that it would lead to our members working on profitable grounds, which would mean that work that was unprofitable would be marginalised. We believe that the concerns we expressed at the time have come to fruition, unfortunately.

**Q12 Stephen McPartland:** This question is to Mr Griffiths. You mentioned that you were enthusiastic for the change, but then you went on to say that the decision was not yours. In terms of the balance of power between the Forensic Science Service and the Home Office, who was actually driving the decision, and were there any disagreements between the two parties?

**Bill Griffiths:** The decision was the result of the McFarland review and it was announced as an objective that we would like to move to GovCo, that we would be driven by the desire to be profitable and then move, in some sense, to a PPP or other status. That decision was taken and announced.

As far as the Forensic Science Service itself was concerned, notwithstanding that decision, we put all our efforts in the year before the change to a GovCo, so throughout 2005 and indeed a little earlier, into making the strategic plan, in which we went forward and with the finances. It was as good a plan as possible and we thought it was a plan for success. We thought the market would grow. We thought the opportunities for innovation would be unlocked. We thought that we would get more efficient without in any way wishing to dismember the business or fragment it.

It was all about executing plans within that context and, had those plans come to fruition, the first strategic business plan that we launched around the time of GovCo forecast a positive outcome for the business, based on a set of assumptions. We thought it was a healthy thing to do, at least to give us a chance to compete with competitors, who were subject to different constraints. They were private sector and they were backed by different kinds of capital structures. We felt that we would gain if we enthusiastically had a plan which we thought could be successful, but it is only as good, of course, as the situation in which you find yourself and whether the growth and so on materialises. Although in the first two years we did flourish, subsequently, in-sourcing and other things derailed us. It became very difficult, so we were not able to profit from the change of status in the way that was foreseen.

**Q13 Stephen McPartland:** Just to be clear, you don’t blame the corporate structure for its failure in commercial terms.

**Bill Griffiths:** I don’t blame the corporate structure in the sense of having some freedoms, running the business in a proper way and having a very transparent dialogue with the shareholder—in this case the Home Office. That has worked very well. What has not worked in the way that we intended is the context in which this corporate structure has operated, that is to say, the marketplace, the relationship with customers and the commercial activities that have put pressure on us.

**Q14 Stephen McPartland:** Prospect has called GovCo a “failed experiment”. Why do you think it did not move from a GovCo towards a PPP?

**Steve Thomas:** It is hard to say. Perhaps it was because there was a lack of appetite because it was seen that the market could not provide an appropriate mechanism to reward those that would be part of that private provision. In recent years, as Bill said, there have clearly been issues with the profitability of the Forensic Science Service. Our members take a different view from the board, and certainly the board at the time, as far as I am aware, and are far less keen. We would be interested to know where the drivers came from with regard to becoming a private company in the first place.

Our members were concerned that the skills that they have to provide evidence to the courts and to provide scientific evidence would be compromised by the need to compete and reduce costs on a commercial relationship. Given the fragile size of the market and the increasing in-sourcing that the police authorities have had, which I am sure we will come on to, in a way that is not regulated to the same extent in private forensic provision, our members were concerned that that just would not work. It is fairly straightforward to see why it did not become a fully privatised company because the Government at the time, and presumably the current Government also, can see that that just would not have delivered shareholder value because of the nature of the work.

**Bill Griffiths:** I agree with that in the sense that, at no stage since the move to GovCo, has the board of the FSS proposed a move to a private status. We would only have ever done that if that was on the basis of a stable, healthy marketplace and business, and we never got anywhere near that. Indeed, one of the problems was that to linger at GovCo for 18 months as originally planned and then possibly go to a different status was fine, but we have been a GovCo now for five years, and that is untenable because we are still not in a stable situation. That is a relevant consideration. The GovCo status was only ever meant to be temporary and a transition stage. The board were not enthusiasts beyond that first period to further progress towards any other status. I share the comments that the business was not in the right place, not stable enough and not right for privatisation, so at least that did not happen.

**Q15 Stephen Mctcalfe:** I would like to look a little more at the financial history of the FSS, if I may. You said in 2005 that you had a positive outlook based on some assumptions, that you thought the market would develop and there was a bright future ahead. How quickly did you realise that that was not actually the reality, and at what point did you decide to look at introducing a transformation programme?

**Bill Griffiths:** The original first business plan that was put forward in 2005 envisaged that the business should be at least successful in the first two years of
that plan. Indeed, we had positive results in those two years. It became clear towards the end of that two-year period that the market wasn’t developing, nor the procurement and all the rest, as I have just said. We then went through a period of further uncertainty. It was only after that period, by the time we got to 2007 or 2008, that we decided we would commission the McKinsey report. That report was very clear that there were difficulties in a number of aspects. We put that report on the table, which we had commissioned to get some analytical capability into the debate. The McKinsey report said very clearly that there were a number of things that were not turning out as planned, including the financial viability of our business, the market reform and so on.

Q16 Stephen Metcalfe: I am sorry to interrupt you, but was there already a contraction in the amount of revenue across the whole market by that point? You talked about the actual market reducing in size from £170 million to £110 million.

Bill Griffiths: No, I don’t know the exact figure between, for example, last year and 2005. Last year it was pretty close to the same as it was in 2005 but the main thing that was happening was that some of the procurement was taking business from us to others. There was an immense pressure on the DNA price. The DNA price was critical to the profitability of the business. The DNA price had been very high and it came down. The police—the customers—got a terrific advantage of lower DNA prices. Those prices went down and immediately affected our profits. We realised then that we had to take structural action, but the structural action could only take place—the “transformation”, as we call it—when we knew that we could also provide the continuity of supply, because the volume of stuff going through was still quite high. The transformation, which involved taking three sites out of seven, was carefully planned but also with a mind not to jeopardise the continuity. In an unstable market we were rather cautious about taking precipitate action and leaving customers unsupplied.

Q17 Stephen Metcalfe: But by 2007–08, when you were introducing the transformation programmes, which you said three years ago, effectively, you could see that your revenues were dropping by about 10% per year, yet costs were only being brought under control by a 2% or 3% reduction per annum. Was that because, as you said, you wanted to provide the continuity of service, or was it just a failure to grasp the nettle and get those costs under control? Also, that 2% to 3% were also exceptional costs that are not included in that.

Bill Griffiths: Yes. The exceptional costs were the costs that were funding the reduction in staff and the efficiencies. We realised that if we were to make reductions—we were aware of just how much we had to do—we had to do it in a way that did not just take people out and stop activities. We had simultaneously to reorganise what was left. The pivotal issue about transformation is that it was not just headcount reduction, for example; the purpose was to leave a business that was smaller and could still operate across the whole range of services that we had to provide. We had to have different ways of working, people in different places and different structures. It took quite a bit of planning. We had to make sure that there was no risk to the criminal justice system, and we had to implement it in a controlled way.

Q18 Stephen Metcalfe: Will you accept that in the years 2008–09 and 2009–10, including the exceptional costs, you were spending more than you were when you were making a profit?

Bill Griffiths: I don’t recognise that we were spending more than when we were making a profit.

Q19 Stephen Metcalfe: The operating costs were not really falling. Then you add back on to those the exceptional costs, which, as it tells me in my papers, were not excluded in the operating costs. The 2009–10 operating costs were £126 million, plus almost £40 million exceptional costs, on revenues of £113 million.

Bill Griffiths: Could I just separate out the exceptional costs? I absolutely accept that funds had to be made available to the business to reduce the operating costs and they went to exceptional costs. But, of course, the benefit of those funds comes through later because the transformation is done, the cost base falls and the number of people falls. The idea was to bring the business back to a stable and more profitable basis. We should say that there was a headcount and a level of costs. We had to restructure the business. We could not do it in a rash way. We did it carefully, and the transformation, which was necessary—I would, again, pay tribute to all involved, including the trade unions and the employees—was praised as being a success because it did get the business to a new basis.

Q20 Stephen Metcalfe: So the programme had worked.

Bill Griffiths: The programme worked.

Stephen Metcalfe: Or was going to work, I should say.

Bill Griffiths: In a large measure, it has worked. We are not yet, unfortunately, because of this situation, going to see the benefits fully.

Q21 Stephen Metcalfe: But you think it would have delivered the FSS back into the black.

Bill Griffiths: Absolutely.

Q22 Stephen Metcalfe: You, presumably, told the Government that.

Bill Griffiths: We did.

Q23 Stephen Metcalfe: So why were they not as convinced as you were?

Bill Griffiths: It is a question for them, but if you take the full evidence that they would have had at their disposal, and some of it is alluded to in their announcement, there is a worry about the size and the contraction of the market. That overwhelms, potentially, the benefits. We were trying to get a business that was smaller, stable and still able to operate across the full range of services, preserving all the skills and all the integrity. If the marketplace,
the environment and, indeed, the appetite for police forces to in-source were going to carry on at a pace, then I can imagine that that would overwhelm even the success of transformation.

We have seen the market go from £170 million to £110 million. I would suspect that it will go very much lower next year. If the appetite for in-sourcing is fulfilled—probably, more than half the police forces have some appetite for it—then you could imagine a market very much smaller than now. The transformation was not intended to resize the business for a very small market of £50 million, £60 million or £70 million.

Q24 Stephen Metcalfe: So what are the figures for 2010/11 looking like?
Bill Griffiths: Compared with the previous year, which was a £12.7 million loss, I would expect this year’s loss to be £19 million.

Q25 Stephen Metcalfe: Is that where the Government are getting their approximate £2 million a month projected loss figure from?
Bill Griffiths: I am prepared to agree that that is where they got it from, yes. There were months where we lost £2 million, literally. We think it is £19 million but that is not counting the benefits of transformation because we have only just closed some of the laboratories—in December and March—and so we are looking forward. All other things being equal, we would have had a much more positive position.

Q26 Stephen Metcalfe: Just to be clear, you as the board of the FSS and the transformation board believe that you did everything you could to put this business on a stable footing, even in a changing market, and it is the events that have overtaken you, that have made life particularly difficult. In the light of that, would you agree that the Government are making the right decisions and they are justified in their decision to do this?
Bill Griffiths: I agree with the first two points about what we have done and the events. As regards the decision, I do not know the full range of judgments that were part of that. That is not a negative statement. I am just saying that I don’t know. I can well see, based on what we said to the Government, just prior to that, that the market is broken and, if it does not improve, our position would be untenable. I can well understand, with other information and all the advice they might have had about what the police were going to do, continuity of service and so on, that they could come to this decision.

Q27 Stephen Metcalfe: But, if you told them it is untenable, is that not effectively saying that it can’t continue?
Bill Griffiths: It is untenable on the basis of our judgment of what was happening and untenable unless there could be a change.

Q28 Stephen Metcalfe: Of the market.
Bill Griffiths: Of the market, of the behaviours and the underlying health in which the forensic providers find themselves. We did not pull any punches in the sense that, if the market goes down, down and down and if there is in-sourcing, then our business could not easily be made viable. We had plans to make it viable. It would have involved more restructuring. Unless we have clarity, then we are trying to aim at a moving target. We were very frank. The real debate for us is how bad this situation is going to get, how the market is going to evolve and so on. In the round, the Government would have had that information, but they would also have had a lot of other information that I have not had sight of, particularly from the police, their officials and other considerations from the criminal justice system as to how the decision was formulated.

Q29 Roger Williams: Good morning. We have heard a lot about the difficulties in terms of the reduction of the market and in-sourcing by police forces, but some would say the cost-effectiveness of the FSS has been damaged by a top-heavy or over-heavy management structure. How would you respond to that criticism?
Bill Griffiths: One of the targets that we set ourselves for transformation was to make the organisation smaller but still able to fulfil the full range of duties. By that, I mean to deal with all categories of crime, to still do the cold casework and so on. We did change management structures, partly to make them leaner and efficient, but also to cope with regrouping our resources in a different way. That was very much led by the customers. So we reorganised into major crimes, sexual offences and so on. As a result, we are a much more customer-focused organisation.

The transformation was aimed at making efficiencies across all parts of the business. That is still right. We did improve on the efficiencies and we did make the top structures better. We could have gone further—I absolutely agree—but, again, we were managing risk and continuity versus speed.

Compared with where we were at the beginning of 2005, we are a much more agile business. I absolutely agree that we could have done more. The structures would have been under relentless scrutiny, particularly corporate support functions and other things. We had to take a risk-based approach. While we might differ on whether “top heavy” is the right description, we have probably got the balance about right for where we are. Transformation, though, would not have been finished even today, and we are very conscious of that.

Q30 Roger Williams: Would Dr Tully or Mr Thomas like to comment on that?
Steve Thomas: Our members’ perception of the management structure, given that most of our members are forensic scientists, would be that there were a lot of consultants around previously. I am not privy to the information regarding their costs or numbers, but that was the perception. That may well have been part of the transformation programme in order to make those cost savings. That was the perception.

As for the corporate support structures, again the bulk of Prospect members working in the Forensic Science Service did not go into that service to become contract managers, commercial lawyers and so forth. I guess, if you are going to have a marketplace where there is
bidding for commoditised work, you are going to need a support structure in order to make those bids, to support those bids, to enforce them, to deliver quality and all those sorts of things that the customer will need. Our view would have been, and remains, that that is not a key part of forensic science, but, if the decision is that a marketplace exists and work needs to be bid for, then there does need to be that structure in order to deliver that. Our question would be what benefit does it to the criminal justice system.

**Dr Tully:** A point worth making is that some of the corporate costs are to do with quality and innovation as well. Sometimes these get mixed up in a bundle called “corporate costs”. We think about a 15% to 20% cost overhead of maintaining a very robust quality system and our accreditation ISO 17025. In addition, there is the forensic function which would be counted as an overhead on the business but which we believe is essential to ensure future innovation and development that will help solve more cases and make forensic processes more efficient.

**Q31 Roger Williams:** Mr Griffiths, you have already mentioned the McKinsey report. Is it a valid criticism that too much money was spent on consultants? Can you, briefly, tell us exactly what the McKinsey report achieved?

**Bill Griffiths:** I would like to distinguish the McKinsey report from the consultants who have been mentioned as far as the transformation is concerned. It is true that the formulation of the transformation strategy, the detailed work that needed to go and so on, was not something we could do through our in-house capability. There were consultants involved. I can well understand that having many consultants in a business is, to say the least, offputting for staff. I absolutely acknowledge that, but it was very necessary. We did not have the expertise and we could not have done it on our own. As far as the McKinsey report was concerned, we tried to provide a genuinely helpful input into a complex situation. We had been going for a couple of years. We thought that we needed an authoritative and independent view, as much to put on the table to stimulate those bids and to put real judgments there, not from a partisan point of view but to inform and genuinely help the dialogue that was going on between us and the Home Office and between the constituents are not always the same.

**Dr Tully:** The delivery of forensic science casework seems to be changing quite rapidly and it is one of the biggest concerns of FSS scientists at the moment. Returning to the early days then, you might have had our customer is quite a good place to start, because, while the police commission and pay for the work, the provision of national services and a different role for the caseworkers in the way they were organised and how they were operating with other scientists. Temporarily, the business got skewed, because we had consultants and temporary people in and overheads that had not been changed. We also had the transition from seven sites to four, which will only just finish at the end of this month. We were on a journey through a model to try and get a stable, better business with different ways of organising our scientists and other people, based on fewer laboratories and national rather than local services. Snapshots in between will show that it is not fully over and, therefore, we have a skewed structure. The idea was to come out of transformation with a business that was better formulated and more capable of delivering in that national way. At no point did we lose sight of the fact that the people doing the forensic work are absolutely pivotal from the point of view of quality, delivery and discharge of the duties in court. The maintenance of that core and strategic capability has never left our mind. We are trying to arrange around that group of people the best possible structure in which to enable them to operate.

**Q32 Roger Williams:** Can you tell us why the number of caseworkers was being reduced while, at the same time, there was an increase in the temporary workers? What effect did that have on the overheads of the business?

**Bill Griffiths:** There are two parts to that. Gill can talk about what the caseworkers do. We were trying to change the shape of the business. We had a business before all the changes that was based on laboratories, to some extent serving local police customers, and we had a full range of capabilities—this is a generalisation, I would say—at each laboratory. We were faced with having to change the way we worked in terms of fewer laboratories, the provision of national services and a different role for the caseworkers in the way they were organised and how they were operating with other scientists. Temporarily, the business got skewed, because we had consultants and temporary people in and overheads that had not been changed. We also had the transition from seven sites to four, which will only just finish at the end of this month. We were on a journey through a model to try and get a stable, better business with different ways of organising our scientists and other people, based on fewer laboratories and national rather than local services. Snapshots in between will show that it is not fully over and, therefore, we have a skewed structure. The idea was to come out of transformation with a business that was better formulated and more capable of delivering in that national way. At no point did we lose sight of the fact that the people doing the forensic work are absolutely pivotal from the point of view of quality, delivery and discharge of the duties in court. The maintenance of that core and strategic capability has never left our mind. We are trying to arrange around that group of people the best possible structure in which to enable them to operate.
and they are not able to see the whole picture and put that together. We have already seen instances where that has led to problems with quality and problems in court.

Q33 Roger Williams: Mr Griffiths, you said that the standing of the scientists in this was maintained all along, but it has been suggested that the position and role of scientists has been downgraded in the organisation. Can you comment on that and tell us how many of your senior managers and directors are scientists?

Bill Griffiths: It depends what group of senior managers you are talking about. I do not have the statistics but I am very happy to provide them. We are very aware that the forensic science capability is absolutely paramount in the business, notwithstanding the competitive market and all of that. We have made every effort to make sure that that forensic capability and the integrity of all the work we do is not forgotten. I do not want to go over too much old ground, but since we started as a GovCo we did have a number of challenges in the FSS to do with quality and reputation in a number of cases. We learnt a lot from that, which is that, if we forget the fundamentals of what we do and the status, nature, experience and dedication of the key people who, ultimately, have to go to court, then we might as well give up because that is the fundamental part of the business.

Of course, for management, the challenge is to accommodate all of that but to address the realities of commercial matters and please customers across a whole range of things. That is a very challenging balancing act. We can’t just be binary. We can’t just say, “We will just do science and never mind the cost or the impact on our customers.” Equally, we have lines that we won’t cross in terms of integrity, training and so on. It is a very big challenge for us. I sense in the organisation, particularly from the board and the senior management downwards, that the notion of the centrality of the forensic scientist is in no way questioned. We have to balance the way we operate and the way that work is discharged as best we can. I genuinely believe that we have not compromised the status and importance of that forensic work, and nor would we, frankly. I genuinely believe that.

Q34 Roger Williams: In 2009 and 2010, when these losses were being made, directors’ pay and pension contributions were being increased. What message does that give to people in the organisation and what was the justification for that?

Bill Griffiths: We would have to look at the statistics by director. We report a number of statistics. We have brought new people in and we have had changes of directors, so the mix of pay has changed. We have a smaller group of directors now than we have ever had. We are very conscious that is a role that is important, absolutely, and it should not be compared with other tasks that are done. We have continued to support pay and conditions for the scientists and others. In no way do we want to diminish things. I admit that individual statistics might cause a problem, but I don’t think we have been trying to send a message that there is one rule for one and a different rule for the people who deliver the work. The people who deliver the work are central to the way the organisation runs. All our efforts, including the senior management team, are to make the environment in which they work as successful as possible. I would regret that people say that we have done one thing for the directors and one thing for the rest. That is absolutely not our intention.

Q35 Roger Williams: Would you like to add something, Mr Thomas?

Steve Thomas: Yes. Just for context, over the last number of years, for the Committee’s consideration, there certainly has not been a bonanza on pay and reward as far as the employees, as opposed to the directors, are concerned. I don’t want to comment on the directors’ remuneration or pension arrangements because I am not sufficiently aware of them to comment. As far as employees are concerned, pay settlement awards and negotiations have been frugal. Over the last six to 18 months there have been significant transformation changes. Around a quarter of them have been made redundant. I wanted to place that on the record if we are talking about remuneration and so forth.

Q36 Pamela Nash: Mr Griffiths, are you able to tell the Committee today what will happen to the archives that exist at the FSS?

Bill Griffiths: I will allow Gill to talk about the archives, but let me say one thing. As soon as the notion of our wind-down was mentioned, the archive issue was immediately flagged as being both of importance and of concern. You need to know in more detail what is in this archive because it is even more critical than it sounds. I am worried that people think it is like a library. I know you have looked at our operations and don’t think that. It is absolutely critical. It is part of the heritage and so on of the FSS. Let me say that it was very firmly on the radar as a worry and a preoccupation right from day one after the announcement and it will get careful attention on the project. A bit more information on what is the archive and what the issues are would be really helpful.

Dr Tully: The FSS archives contain over 1.5 million archived case files. Those case files contain all the notes, examination records and the results of a large number of historical examinations that have taken place. They also contain all the records of continuity; that is where every sample has been, how they have been stored and all such records you would need in order to secure a successful conviction in the future. As well as the case files, they contain a large number of retained material. That includes DNA and microscope slides that perhaps have a very thin smear of a sample taken from a swab from a rape victim that may be the only evidence left in the case. It has fibre tappings, which, again, we have been able to go back to, which we have taken to recover fibres. We have been able to go back to them with new techniques and recover DNA and other evidence types. There is also all sorts of debris recovered from examined items. These sorts of archives and their accompanying records do not exist in police forces or elsewhere, so
the magnitude and the importance of the archive cannot be underestimated.

In conducting any sort of review into old cases, we use the term "cold case reviews", which means we go back and undertake a thorough and systematic examination of retained material, archived material, case notes and case files to see if there is any material left that would benefit from re-examination in the light of new methods and techniques that have been developed. This is generally undertaken in close cooperation with the police force that knows what has happened in the case outside the forensic arena. We have undertaken that type of analysis in many cases. We have had over 220 successful convictions from very old material based on using new methods and new techniques.

**Steve Thomas:** Can I just add to that as well? It is right to look at the actual records and the archives that exist, but one thing that is important to our members and the employees of the FSS is the intellectual record that accompanies the work that is done. Our concern would be that you could move the archive—if you want, you can term it as a "library", although it is more than that—from one place to another and have someone else run it, but if you don’t transfer the skills and the knowledge that have been built up, in some circumstances over decades, which understand how the original methodology was used and what should be given reconsideration when technology advances, you lose that link. When that happens not only do you, potentially, lose the access to the record, but you lose the context in which that analysis is done. There is the physical side of archiving, but, for us, there is also concern about the intellectual qualities required for that. Given the Minister has announced that there is a need to return a profit on this and for the private sector to pick up the slack, our concern would be how profitable it would be and what marketplace there can be for, as was described, old or cold cases.

**Dr Tully:** Just to add to that, with which I agree fully, at the moment there are over 5,000 metres of storage space involved and 17 people just maintaining the records. When you look at the skills needed, as Mr Thomas said, to mine these records, you need the historical understanding and the context of how the cases were undertaken. You need to be able to understand how the notes were written, the shorthand and so on. That skill needs to be preserved for the future and there needs to be succession planning for that skill, otherwise it will be just a warehouse, which is no use to anyone.

**Q37 Pamela Nash:** Thank you. You have led me quite neatly on to my next question. Are there any plans in place already as to what will happen to the archives? Also, is it likely that staff from the FSS will be following those archives? I don’t know who is best to answer that.

**Dr Tully:** At the moment, to my understanding, there is not yet a plan for what is going to happen to the archives. We are engaged in actively planning how we are going to archive all the current material and all the cases that are currently being undertaken and won’t be finished before the wind-down of the FSS is completed. We are also engaged in planning how the archive will be appropriately documented and placed in the best possible position. Beyond that, to my knowledge, there is not a plan for what will happen to it.

**Steve Thomas:** If there is one, I would like to hear it.

**Q38 Chair:** Before we move on from the archive, can I be clear on this point? If, for example, the decision was taken that all case files would be returned to the originating police authority, in other words, to break up the archive, would that damage the capacity of the Forensic Science Service, however it is configured, to solve some of those cold cases in particular?

**Dr Tully:** In answering that question, the point about the people who know how to mine the archive and how to place the information that is in the archive in context is even more important than where the physical archive is located. If that skill set is broken up, that would be of huge damage to the criminal justice system.

**Q39 Chair:** So you would argue for retaining it as an entity and continuity in terms of the support mechanism around it.

**Dr Tully:** Yes.

**Q40 Chair:** Mr Griffiths, you have had to manage the process. Is that your understanding in terms of what would be a good business process?

**Bill Griffiths:** I absolutely agree. This is one of the important challenges that we started with once the announcement was made and for which we have a limited period of time to solve. It is very clearly on the list of the most important things that have to be tackled. It is part of the sub-set of how we maintain the strategic experience and capability of the people, the systems and the information we have, no matter what happens in terms of dispersal of activities. That is the biggest challenge we all now have, I thoroughly agree with that in terms of the archive and it is replicated in other areas of expertise across the business.

**Q41 Pamela Nash:** Mr Griffiths, will this be a decision that will be taken by the transition board?

**Bill Griffiths:** The transition board is a forum to get the participants together and to discuss things. My view is that, as our prime responsibility, we are trying to look after FSS and its activities. Of course, we will use the forensic transition board to discuss and broker agreements, but I regard it as our responsibility to find good solutions to these matters. They are within the orbit of FSS now, and our job is to make sure that these are brought to people’s attention and we find good solutions. We will use the forensic transition board to facilitate, co-operate and manage things, but we are going to take the responsibility for moving the things forward.

**Q42 Pamela Nash:** Do you have any idea of the time scale of the decisions on what might happen?

**Bill Griffiths:** According to the announcement, we have a year from now maximum. Within that, if we
are to adhere to that timetable, it means that a whole raft of things have to take place. Decisions will have to be made not just about the archives but where the work that we do is transferred, and to what extent the other suppliers or anybody else could take up the work. All those arrangements that we have in place for FSS have to be thought about. Those decisions have to be taking place within the coming months, because implementation time has to allow for what is a huge job, even just on the archives. If you take all the other things we do, we have pipelines of cases that have got to transition. We have somehow got to make sure there is continuity, and our time scale is very challenging. It is now and in the months ahead that we are going to have to solve some of these problems and make the decisions so we get to implement them safely by the deadline of one year from now.

**Q43 Pamela Nash:** In a moment I am going to move on to the future of the staff, but before I do that I would like to ask a practical question. Who actually owns the physical assets that are used by the FSS currently?

**Bill Griffiths:** Forensic Science Service Limited, the legal entity, in general, owns what we have.

**Q44 Pamela Nash:** In that case, who will determine the value of those assets and arrange for their disposal?

**Bill Griffiths:** It is the board of directors’ job to ensure that the assets that move out of the Forensic Science Service Limited entity are done at an appropriate value, that we approve the transfer, that there is documentation to show there is best value, and, indeed, that there is a rationale for how the transfer is done. That is our responsibility as directors of the company. That is a safeguard in the sense that we are going to discharge that duty rigorously to make sure that we know exactly what is happening, where it is going and what value is generated.

**Q45 Pamela Nash:** On staff, how confident are each of you that the private sector within the UK will be able to absorb the staff who are currently employed at the FSS?

**Dr Tully:** If I could start on that, one of the interesting historical pieces of information that we can draw on is to look at what has happened to staff from our closed laboratories at Chorley and Chepstow. Obviously, we don’t have a full data set, but, in the main, from the information we have been able to gather, around 90% of the leaving staff have left the profession completely. There is a real risk to the UK’s capability and capacity to undertake forensic science well. Some of the issues will be to do with relocation. Not all of these members of staff, and particularly very senior members of staff who are at a stage in their career where they are settled in an area, will be willing to relocate. There are issues of where the capacity is. Some areas have overcapacity, in some commodity areas, for example. Other areas have undercapacity. There are also areas of specialisms. The one thing that is perhaps exempt from the 90% figure is some very small niche areas where people do tend to stay in the industry. I certainly would be concerned about the ability to maintain in sufficient critical mass, in one place as well to be effective, a body of forensic scientists with the skill, expertise and training that they have developed over many years.

**Steve Thomas:** I would just echo that. I wholly agree with the comments that Dr Tully has made. What has happened where buildings have closed in Chorley and Chepstow, for example, is illustrative of that, because, as you say, about 90% have left the profession. We have also more recent experience of TUPE transfers where there has been an unsuccessful bid for a contract or contracts have moved to a competitor, where about 17 members working on the London drugs contract moved over to one of the competitors, LGC, along with the work, and not one of them actually ever set foot in an LGC building because they were all made redundant before they even made it.

**Dr Tully:** There is also an issue, if I could add to it, of areas that don’t easily transition into the commercial providers such as some of the niche areas that are and have been for some time unprofitable, the research and development area, and other core functions that don’t necessarily sit as comfortably with the existing commercial providers.

**Bill Griffiths:** Let me add to those comments, which are very important. Somehow we have to find a way with this transition, this move, to wind down the FSS, to make sure of the full extent to which other suppliers, because that is what your question is about, are able to take the work that becomes available. I am absolutely sure, in contrast to some thoughts that were expressed when the decision was made, that they will need FSS staff absolutely. We have to find a way of ensuring that that move of staff is done in as efficient and elegant a way as possible. It is not imaginable that the FSS can cease. We still do the majority of the work—50% to 60% of the work—in the country, and we have a great capability. It is unimaginable that there won’t be a need to transfer numbers of staff. I would wish that as much of that capability still continues in the criminal justice system, even if it is in a different entity from the FSS. We must find a way of doing that, and all our efforts and discussions are really to search out ways of ensuring that that happens. It is about irreplaceable skills and experience.

It is a challenge and it is one of the many imperatives we have with this project. Having been announced, it is not just a closure plan. It is a transition and we have to make sure that those people are captured and they are judged for the work they have, which might not be apparent. That is another worry, as we have described it here. There has to be a real appreciation of the experience and credibility of these people. We have to make sure that they are centrally positioned in the criminal justice system and don’t go off to do other things because they are disillusioned or left stranded. We feel, from the point of view of the FSS board, that there is a big responsibility to try and articulate that in as clear a way as possible to the other participants in this project.

**Q46 Pamela Nash:** I have one final question. Dr Tully, you mentioned that the more experienced members of staff are likely to be settled in an area and
Q47 David Morris: We are where we are on the matter of funding, but what would be your preferred alternative to the closure of the FSS and how much do you think it would cost the taxpayer as an alternative that you would put forward?

Bill Griffiths: The alternative that we proposed was a further restructuring. We made that proposal on the basis that that restructuring, if it was to happen, could be done based on a stable knowledge of the market and the dynamics of the relationship between us and the police. There is no clear view, I would argue, yet of the market. That makes it difficult to forecast whether that restructuring or further restructuring would be successful. I think we would execute it successfully, but would it be all that is needed?

The real question, to answer what the cost of an alternative solution would be, is: what is this marketplace that we are in? Is it £110 million, as it is now, which is significantly below last year, or is it, as seems likely, going to be very much smaller? That is the first question. If it is £50 million or £60 million, is that what we are aiming for? In that case, an integrated forensic supply business like the FSS would be very challenged by that size of market. Is it a market that is only going to have the basic testing in it, a relatively commoditised business with low barriers to entry for the suppliers, or is it going to have the complex important casework in it? There has been very little tendering of complex casework since the procurement framework was put in place. What we have had is mostly procurement activity around the basic commodity items. One might wonder why it takes so many years to do that because it is a relatively simple thing.

Before we go any further on the analysis, I think it depends on what the target is for which we are aiming. Is it £50 million of commoditised testing, in which case the FSS has, clearly, not been set up, nor is it equipped or staffed for that kind of a business, or is it something that is more close to the level of spend and complexity that we had last year, in which case we could do a further restructuring? It all comes back to this. In what environment are we resizing or reshaping this business as an alternative to the wind-down proposal?

Q48 David Morris: Do you think there is a devolved Administration or a different nationality’s model that you could adopt or emulate in the future?

Bill Griffiths: Perhaps you could deal with the different nationality point, Gill.

Dr Tully: Without having a full set of data before me on the efficiency and cost base of all the different nationalities, just from my own personal knowledge of the different jurisdictions and how they operate, the Netherlands has a good system. The Netherlands Forensic Institute is a core state funded institute. There is a small amount of commercial competition in the market that has, in the last couple of years, demonstrably increased turn-round times dramatically. I do not think it is a straightforward answer as to whether it is an alternative, but, if, for example, in-sourcing by police forces was reversed, the market would be transformed in terms of size. Of course, everything would be to play for.

If the definition of the forensic spend was changed to embrace other things which are currently classed as “forensics” within the police forces’ book, to which we don’t have access, then that would, of course, also transform the size of the market. So there could be a bigger and more diverse market. That is a macro change to the equation and that is very much an issue for the project. The intention is that we have a competitive market. The intention is that there is no public sector interest in forensic science. So the issue of in-sourcing versus out-sourcing from the police is a pivotal decision in all of that. The trend is one way, but if that was reversed that would change things.

That structural change has to be considered. Indeed, we are having to face it in the transition, because are we transitioning, as we have just talked about, stuff to the private sector suppliers? Can they take up our staff, or is there going to be a situation where they will have to transfer to police forces? That depends, I suggest, on the policy decision on in-sourcing versus out-sourcing. That would have a massive effect on all
these numbers that I am talking about. Instead of them going down, they would go up and there would be more diversification. They would be more attractive to other suppliers and so on. I would like to put that on the table. So far as reversing is concerned, we have not taken irrevocable steps at this early stage. What we are trying to do is prepare for a path, be able to inform employees and have a strategy for the transfer of skills. In one sense, we have not made any irrevocable steps, but it would require a terrifically clear proposition in super quick time. We have an organisation which we have to hold together. The marketplace is sensitised to this change so that would have to be altered. Also, we would have to make very big efforts to retain the credibility of the staff if suddenly we had to change to a new proposition.

I would welcome consideration of what the total available market is, because, whatever happens about this decision, that is a critical factor in retaining the capability of our people and having a proposition that keeps the skills in the marketplace and keeps the whole thing productive and healthy. Whether that comes out, it is a little early to say, although we are trying to do these things in a matter of weeks and months, not years. We will probe that. It is a pivotal issue for the Home Office as to how it wants to decide on that.

Q50 Graham Stringer: Who is going to gain and who is going to lose if the FSS closes?

Bill Griffiths: There is a big risk to the criminal justice system if we don't manage continuity. There are big risks in terms of the loss of experience and capability that we have talked about. If we dissipate the skills and they are lost, then strategic forensic science, and we do a lot of work outside the police forces, the ability to do cold case reviews and to implement the pipeline of innovation would all be lost. The criminal justice system in general and the country would be very disadvantaged if we don't manage it well.

Who is going to gain? That is difficult to say. I do not have a persuasive answer as to who is going to gain. You might suggest that the other competitors would gain. That might be a thought, but it is far from clear what the prize is there. There is an inherent risk, obviously, as anyone steps up to the mark.

Financially, at least, the problem has been crystallised and will be dealt with, but, in terms of the magnitude of the risks, that is only one consideration.

Dr Tully: Perhaps I could just add that the international community of forensic scientists has commented very vocally on the loss that they would feel of the Forensic Science Service. There would be a concomitant loss of influence for the UK in forensic science policy making, particularly in Europe, but further afield as well.

Steve Thomas: I would like to add that there were press reports yesterday in The Times about junk science, as it was termed. It is important to see that the potential loss, as Mr Griffiths was saying, relates to the provision of information to the Court Service, the methodology that could be used if it is being provided by different suppliers, and the lack of regulation and necessary quality standards, particularly if the work is done in-house. That is something that needs to be given consideration, as well as the leading edge international side of the work that our members and employees do in the research and development field that is not currently done elsewhere.

Q51 Chair: Apart from the fact that they called me a Conservative MP in The Times, is that article a fair analysis of the situation?

Steve Thomas: Our view is that it is a fair analysis of the questions that are unanswered, given that we have not seen any plans as to how it has been progressed. It is at least as inaccurate as the comment on your political persuasion. The examples included in the article are real. The concerns are not just on the effects on criminal justice, but the financial costs of criminal justice and potential miscarriages of justice and so forth should be given consideration as well as the more pressing issue that will be of concern to citizens, including myself, as to what the situation is if someone who is innocent gets locked up and somebody who is guilty walks free. That is something that is hard to put a price on.

Q52 Graham Stringer: Following on from that point, I am always wary of abstract nouns like “justice”. They are difficult to define. You are saying, and tell me if you are not saying this, that, because of what might happen to the archive and the decline in interpretive forensic analysis, murderers and rapists, both from the cold case files and currently, are more likely to get away with things.

Dr Tully: Let me give you an example. I think this is probably a good way to illustrate the situation. I was having a discussion with one of my colleagues on the cold case side of operations yesterday and she told me about a case that a police force had been reviewing internally itself for six years. Eventually, they brought the forensic science to the FSS to review. As soon as the first set of testing was done, the case was resolved. Many years can be saved and justice can be brought about more quickly and efficiently.

One of the biggest concerns, certainly for us, to do with quality and what could happen and go wrong is about the level of fragmentation that I mentioned before. Perhaps it is worth giving an example of how this can work. There was a case in which an individual was stabbed in a gang attack. The clothing of the suspects was examined in an in-sourced police laboratory and swabs of blood were sent to our laboratory for analysis. Our laboratory was able, perfectly competently, to determine the DNA profiles from the swabs, but it was not able to put any context around that in terms of where the blood was found and was it where it would be expected to be found. In the case of some of the gang members that was sufficient and at the first trial they were convicted. What happened was that the clothing of one of the gang members that was screened in the police laboratory was negative for blood. It was reported as containing no blood.
Coming up to the retrial, our scientist asked the police if she could re-examine the clothing. One of the ways forensic scientists look at cases is to think, even before they look at the items, “What would I expect to find here if this was true? What would I expect to find here if that was true?”, and then put the findings into context of what they would expect. She would have expected to find blood on the clothing of this individual if he was involved in the attack. Indeed, when she re-examined the clothing, she found a very fine spray of blood on that clothing. Not only was the DNA a match with the victim, but the important thing was the pattern of the spray of that blood.

The case went to retrial, the individual was convicted and, because our scientist was able to put it into the context that he must have been very close to the victim at the time of the attack, he got a longer sentence than the other gang members. That required a retrial and significant extra work to obtain that conviction.

Q53 Graham Stringer: As far as I am concerned, this is absolutely central to this inquiry and I do not want to leave any ambiguity about it. You are saying, aren’t you, that it is likely that there will be less cold cases taken up and resolved to satisfactory conclusions with criminals convicted, and it is likely as well, given the case that you have just cited, that some convictions won’t take place because the interpretive forensic science is not as good?

Dr Tully: Both of those things depend on what happens, because, again, if the archive and the skills can be preserved, clearly, that work can continue. If the trend towards fragmentation in a procurement framework and commoditisation is reversed, then, potentially, that work can continue if the staff find a home with sufficient critical mass and sufficient expertise in all of this.

Q54 Graham Stringer: That was a very cautious answer. We will put that in the context of your other answers about 90% of staff leaving. So it is unlikely.

Dr Tully: Yes. There is another issue to do with quality that we have not talked about yet in that all the forensic science providers in England and Wales in the system are accredited to the international standard ISO 17025 and they need to be accredited to that standard to be accepted as providers under the forensic procurement framework, but the vast majority of police labs are not accredited in any way.

Chair: We will cover that in some detail in a moment. Thank you for that.

Q55 Graham Stringer: Continuing with what is likely to happen in the market, we talk about the market and the market shrinking, but that is not really an accurate description, is it? What is happening is that your customers are turning into competitors and that is what is shrinking the market. Is that right?

Bill Griffiths: It may be a combination of less forensics being done in total and, indeed, some of it being done by the customers and not available to the external suppliers. There are two factors at work. Clearly, there have been efficiencies, budget cuts or less expenditure, but also a combination of it going in-house. I do not have the figures for the total amount, but it is a mixture of two factors. It is certainly significant that they are essentially competitors in that regard.

Q56 Graham Stringer: We are seeing police forces using public money to take things in-house, probably to lower forensic standards and, effectively, destroying the central facility. Is that fair?

Bill Griffiths: It has certainly been going on for a while and it has had a marked effect on us. The prospect is that that may continue. That is a major factor in our difficulties.

Q57 Graham Stringer: Can I get back to a previous question that Roger asked about directors’ salaries? You didn’t give the reason why directors’ salaries went up when work was declining.

Bill Griffiths: When we changed the directors—some retired, some left and so on—we brought new directors in and they did not necessarily get the same salaries as the previous directors. The total mix that is reported can go up because the composition of the team of the directors has changed, but we have certainly been careful about keeping a lid on directors’ salaries.

Q58 Graham Stringer: I have a final question. Do you think that forensic science, ultimately, is suited to a market approach?

Steve Thomas: I would like to answer that, if I may. Prospect’s view is and remains that commoditising forensic science work for the provision of evidence to the criminal justice system is not suited to the market in the same way that the Crown Prosecution Service is not necessarily suited to privatisation. Ours believe that as well. Our view would be that it is not suited for the market. There may be repeatable industrialised processes that can be used on fairly standardised testing that can be put out to a market and bid for, but when it comes to research and development and providing impartial advice to the courts, as our members said to the Select Committee yesterday, our view is that it is not suited to that. When the question is about a £2 million loss being made each month, we can argue that that does not take into account transformation costs. The question has been asked in the House and there has been no response. However, even if it were £2 million, our view is that that is not a loss. It is a cost to the criminal justice system.

Q59 Gavin Barwell: Chairman, I want to carry on from where Graham left off. I want to get a clear view on the market. You have used the figure of £170 million several times in the previous year and £110 million this year.

Bill Griffiths: For the market that is available to external suppliers.

Q60 Gavin Barwell: Exactly. That is the question I was going to ask. That is the external market.

Bill Griffiths: Yes.
Q61 Gavin Barwell: Do you have figures for the level of expenditure in-house by police services? I believe the fire service also does some forensic work as well. Do you know what the level of these were in those two years?

Bill Griffiths: I don’t have the exact numbers with me, but we can assert that the level of in-sourcing has gone up. Work has been done by HMIC that shows there have been significant increases in in-sourcing. We know that the in-sourcing is going up. We have to focus on what the total spend is. We need to add the external and the internal in the round together, on a like for like basis. Again, I am a bit wary about bandying numbers around because we are very clear what the external market is, but the way expenditure is counted within the police forces and whether the definitions are precise is an issue to do with transparency of data. There has been a significant increase in in-sourcing over the period and that will continue. That is why I say the market is likely to fall significantly below the £110 million in future years.

Q62 Gavin Barwell: We will, obviously, be asking other witnesses that question, but any data that you do have will be very interesting.

One of the things we picked up in our informal discussions yesterday was the sense that there is a degree of cherry-picking going on, that the in-sourced work tends to be the simpler work and the work that comes to you is the more complicated and expensive work to carry out. Do you believe that, if the police and fire services had to go to external suppliers for all forensic work, you would not be in the position that you are in today and the business would be viable on that basis?

Bill Griffiths: Absolutely. If we had a complete marketplace with clear boundaries and a healthy group of suppliers competing, it would be much more sustainable and much clearer about what the roles are on both sides of the equation. Clearly, the trend is slightly the other way at the moment. It is definitely a way of improving the health and stability of the marketplace to have not just a different procurement system but also different boundaries around the market. That is the clarity that we have missed since 2005. The proposition for us was predicated on a clear view of the market boundaries and those market boundaries have not been sustained.

Q63 Gavin Barwell: I was going to ask a question about whether you have concerns about the quality of the police, indeed, potentially, fire service forensics, and also about impartiality. Dr Tully has touched on the quality issue, but I will give her the opportunity to expand on that. I am interested both in the issues of quality and impartiality.

Dr Tully: If I deal with the issues of quality first, we would like to see a level playing field on quality where all suppliers have the same quality standards. The forensic science regulator is putting forward a framework on standards for quality, but it is not mandatory. As yet, the forensic service providers are generally taking a very positive approach to that. As I have said, they are all already accredited to ISO 17025. There are pockets of accreditation within police forces as well, but the vast majority of the laboratories have not gone for accreditation. That does not mean that their quality is bad, but it means that there is no way of measuring whether their quality is good or bad and there is not a culture of continuous improvement embedded into systems and processes—there may be in people but not in systems and processes.

We believe also that, although ISO 17025 is necessary, it is not sufficient to ensure quality because it is very much a standard that is around laboratory testing. It does not really cover issues like setting the forensic strategy for a case, working out which items to examine and which not. It certainly does not cover the complex interpretation of the results and the presentation of the evidence in court. It is part of a wider framework that is not in place and is certainly not in place as a standard across all laboratories. As I say, the forensic science providers are generally all compliant with ISO 17025.

One of the historic and current roles of the FSS has been in advising on quality standards. I think Dr Willis from the Dublin laboratory said in her submission that, without the FSS, the mother ship will be gone and the regulator standards are built on FSS norms. Again, for onward development, the regulator will need advice from practitioners, those will need to be built on, and it will all need to be improved if there is to be good quality across the board.

Q64 Gavin Barwell: I have two final questions. Earlier on in your evidence you said something along the lines that you felt the police and the Court Service had slightly different interests when it came to forensics. Do you want to spell out what you perceive those interests to be?

Dr Tully: The police are under tremendous cost pressure and are seeking to conduct their investigations rapidly and at low cost. Sometimes, in our experience, low cost and value for money have not necessarily been the same and have been confused. The submission from the Forensic Science Northern Ireland lab puts it rather well in that the courts are wanting high quality, well reviewed science, with no real consideration of the cost at that part of the process.

We have anecdotal examples recently of additional forensic work being required by the CPS just before a case goes to court, because, although correct analytical tests were performed, they did not actually answer the questions that needed to be answered for the courts. For example—and this is important in terms of the role of innovation and whether that can be fully supported in the commercial marketplace—of benefit to the courts are robust data sets on which to base interpretation. Something like going out and generating a survey of how many gun shot residue particles are generally found in the environment is extremely important if you are going to interpret low levels of gun shot residue in criminal cases, but the police as procurers of that forensic science would not necessarily want to pay for the overhead of having that study performed.
Q65 Gavin Barwell: You have given a number of examples to the Committee of situations where, perhaps, the police didn’t initially make the best possible use of the forensic advice that they could have obtained. You gave the example of a case that had been reviewed for five years. Then they came to you for a cold case review and the matter was quickly resolved with a successful prosecution. You have talked about how often you just get asked to perform a test rather than a wider analysis of all the forensic data. What would your general experience be of the extent to which the police understand and make the best use of forensics? If the answer is “Not particularly well”, does that point in a different direction to much of what we have discussed today, and saying that having forensics closer to the police might be helpful in that regard?

Dr Tully: That is a very difficult question to answer. I don’t think I have enough of a view across enough forces and enough different evidence types to give you a realistic answer, although I would be very glad to come back to the Committee with a better response to that question. It would be better if I was to do some more thorough work and come back with an overall view. Our experience is that the procurement framework is moving away from that good use of forensic science.

Q66 Stephen Mosley: From what we heard yesterday when we visited the lab in Lambeth and from what you have said today, there seem to be some areas, in particular the analytical testing work, that can be done across a broad range of providers, but there are some areas in which you seem to be almost unique. We have talked about the cold cases, the interpretive work that you do and the advice you give. One of the other areas is research and development. I want to go into that in a bit more detail. Before I do so, do you think that that is a fairly accurate assessment of the situation and are there any other areas that only you, the FSS, provide that are not available elsewhere in the marketplace?

Dr Tully: One area that has not been mentioned yet is some of the work on sensitive counter-terrorism investigations, particularly where those are going to end up in court and it is not just for intelligence purposes. In terms of where else those services can be provided, other than evidential work in relation to terrorism cases, I believe that we are the only organisation that has experience of doing that. LGC is another full service provider in the market and they provide many of these different services. Again, it comes to where the critical mass is for the whole of the UK provision. Many of the other providers just provide some services and not the full range, so I think it is a fair assessment.

Q67 Stephen Mosley: A couple of the scientists that we saw yesterday mentioned chargeable and non-chargeable work. I guess that, if it is straightforward test, there is some sort of charging structure, but if it is a police force or one of the secret services coming to you asking for advice or suggestions on how to proceed, would that be chargeable or would that disappear into your corporate costs budget, effectively?

Dr Tully: There has been a history of it disappearing into our corporate costs and we have been trying to get on top of that to provide added-value services whereby, as well as the analytical services, our customers can pay for this added level of advice. That has not necessarily been easy to do given the structure of the procurement framework.

Q68 Stephen Mosley: I guess that, if the secret services came to you and said, “We need a hand on this”, you are not going to turn round and say, “No”, are you?

Dr Tully: No.

Q69 Stephen Mosley: Fair enough. When it comes to research and development, how do you think the closure of the FSS will affect forensic science research and development within the UK?

Dr Tully: The FSS conducts probably more forensic science research and development than any other organisation, certainly in the UK and possibly worldwide. The only other organisations that have a similar scale of research and development would be the university of Lausanne, the FBI and growing areas in the German, Dutch and some of the eastern European areas. In terms of scale, it is enormous. One comment has been made in the scientific press by a former leader of research at the FBI, Professor Budowle, who said: “Indeed, we cannot think of any other forensic institution worldwide that has contributed more to the advancement of the forensic sciences than the FSS.”

I would like to put into context as well that we have a central research and development facility that is very sizeable and productive, but, as well as that, we have research, development and continuous improvement happening throughout our operational laboratories. We have principal scientists in each field who lead the development in their areas, and many of these scientists, both in the research and operational areas, are leading scientists worldwide in their fields. The contribution of the research effort is significant.

Q70 Stephen Mosley: If the FSS does close, can you see the police or the private sector taking a lead in research and development, I guess, particularly in cases where there might not be an obvious immediate need?

Dr Tully: There is some research and development in the private sector, but not all research will produce a commercial return, or the return on investment will be far too far in the future on which to make a sensible investment decision. Without some centrally sponsored focus on research and development, I don’t think the private sector or the police will take up the range of research and development that needs to be done. There will be work done on improving efficiency of internal processes at individual laboratories, but there will be little work done on providing improved data sets, improved methods of interpretation and those areas of innovation that are aimed more at courts and less at operational efficiency.
Q71 Stephen Mosley: Is there any support for research and development within forensics that comes from the research councils at all, or is it all pretty much from within your own internal budgets?

Dr Tully: Our own investment in research and development is almost exclusively from the FSS.

Q72 Chair: How much is that?

Dr Tully: This year it has reduced since the announcement in December, but our spend over the last number of years has been in the region of £3 million to £4 million a year. That is only on the central research and development facility. You have to add to that our IT development of several millions a year and the development that has happened in our operational laboratories.

Q73 Chair: Does that include people?

Dr Tully: That includes people.

Q74 Stephen Mosley: You will be aware that, in January, the Home Office announced a review of research and development in forensic sciences. Have you been involved in that review and do you have any thoughts on the timing and what they are trying to achieve out of it?

Dr Tully: We have certainly been involved and we have submitted a response to that review. Even before the closure of the FSS was announced, I had invited the chief scientific adviser to the Home Office to come and see what we do in forensic science research because, with it being within his portfolio, it was important to do that. He has come in and seen the range of our R&D, and we have made a submission. We are slightly disappointed that the submissions are limited to 1,000 words. It makes it very difficult to get across the range and the importance of this subject. We have made ourselves fully available to the review and we will contribute as actively as we possibly can.

Steve Thomas: The union has also made a submission to that review. We welcomed the announcement of the review, although we were concerned about the timing of it coming after the announcement of the closure.

If I can just expand on a couple of points on research and development, part of the concern that has been expressed far more eruditely than I am going to be able to do in the submissions to the Select Committee has come from the international community. It is important to be clear that so much crime and so much co-operation is required cross-border on crime. Examples are terrorism and so forth. Good practice is cross-border.

Our concern, and this was reflected in the article in The Times yesterday, is that because of commercial imperatives and confidentiality, and particularly if you are working on short contracts, there is less of an incentive to develop the R&D capability, but there is also a difficulty and a commercial imperative not to share that information, not just with competitors but also with defence teams in the courts. We are presuming that this is part of the review process that is going on at the moment into the closure, but that is quite critical. The example cited yesterday described knowing that a test has gone on, knowing what came in at that end and what came out at the other, but not actually knowing what went on in the meantime. That is what could be missed. The importance of peer review, transparency and cross-border openness, particularly with the nature of some of the cases that are managed these days, is of critical importance and of real concern to Prospect and our members.

Dr Tully: To add to that, I would like to point out that the FSS has been the most prolific publisher worldwide of forensic science research in peer review journals, again, with the exception, possibly, of Lausanne or the FBI. We do contribute to the scientific community on how we develop our methods. Part of our sign-off criteria for new methods, if they are sufficiently novel, is that they have been peer-reviewed and accepted by the press. This is in contrast to some of the other submissions to this Committee that have claimed that FSS is not publishing. As in our submission to the review by Professor Silverman, we have given a record of our publications over the years. We have published hundreds of papers and it has not fallen off at all since we transitioned to GovCo.

Q75 Chair: Thank you very much. We have covered a huge amount of ground this morning. If there are further pieces of information that you would like to submit, please feel free to send us a note on anything you felt you missed in your responses, including what the full version of the paper you submitted to the Select Committee has come from the international community. It is important to be clear that so much crime and so much co-operation is required cross-border on crime. Examples are terrorism and so forth. Good practice is cross-border.

Bill Griffiths: Could I say, finally, that we are really grateful for the interest that you have shown and the quality of the discussion? It is much appreciated. Thank you very much.

Chair: Thank you.
Wednesday 30 March 2011

Members present:
Andrew Miller (Chair)
Gavin Barwell
Stephen Metcalfe

Stephen Mosley
Pamela Nash

Examination of Witnesses

Witnesses: Professor Jim Fraser, Director, Centre for Forensic Science, University of Strathclyde, David Hartshorne, Commercial Director, Cellmark Forensic Services, Professor Sir Alec Jeffreys, Professor of Genetics, University of Leicester, and David Richardson, Chief Executive, LGC, gave evidence.

Q76 Chair: Good morning, gentlemen. Thank you for coming in today. We have rather a lot to get through. With a panel of four, it sometimes takes a little longer. If you feel that I have cut you off at any stage and you want to add something subsequently, please feel free to add comments in writing after today. For the record, I would be grateful if you would introduce yourselves to the Committee.
Professor Fraser: I am Professor Jim Fraser. I am director of the Centre for Forensic Science at the University of Strathclyde.
David Hartshorne: I am David Hartshorne. I am the commercial director at Cellmark Forensic Services.
Professor Sir Alec Jeffreys: I am Alec Jeffreys of the University of Leicester. I am a human geneticist and developer of forensic DNA technology.
David Richardson: I am David Richardson. I am the chief executive of LGC.

Q77 Chair: Thank you very much. Can I, first of all, ask whether any of you were consulted by the Home Office prior to the FSS closure decision?
Professor Fraser: No.
David Hartshorne: No.
Professor Sir Alec Jeffreys: No.
David Richardson: No.

Q78 Chair: That was fairly straightforward. In your view, did the Government give sufficient consideration to the impacts on forensic R&D before it decided to wind down the FSS?
Professor Fraser: No.
David Hartshorne: I don’t know what consultation they did around R&D. Clearly, there is the ongoing inquiry to look into this. I am sorry, but I am not in the best position to comment on that. I don’t think.
Professor Sir Alec Jeffreys: I would say no. There was a ministerial statement saying that the UK Government was not interested in funding forensic science.
David Richardson: They were certainly aware of the R&D work that was being done in the private sector, but beyond that I am not aware of any further consideration.

Q79 Chair: There does seem now to be a review of forensic science R&D that has come after the closure decision. Does it have any purpose and have any of you been invited to contribute to it?
David Richardson: We at LGC have contributed to that review. We had Professor Silverman round to see our facilities quite recently and we have put in a submission to that review. So we are involved in it, yes.
Professor Fraser: We have also submitted a response to that review. If I can make a couple of brief comments, that needs to be seen in the light of comparing research and development in forensic science with equivalents in the rest of the scientific community and internationally. The position is very bad.
Professor Sir Alec Jeffreys: I have not been approached to give evidence in this review.

Q80 Stephen Metcalfe: One of the things that we have looked at and which is key to this whole thing is whether there is a market in forensic science. Do you believe there is a market?
Professor Sir Alec Jeffreys: Perhaps I could start. Obviously, there is a market, and a very good example of that is the work we do on DNA, which has generated an exceedingly large industry worldwide. The key thing with forensic science is the new transformative discoveries that will be coming over the horizon and whether the UK is positioned appropriately to be able to detect these and develop them, and specifically whether the type of organisation we have within the FSS is well positioned to make those transformative developments. I would argue that no, I don’t think they are.

Q81 Stephen Metcalfe: Perhaps I should have added a “viable” market. Is there a viable market for forensic science?
David Hartshorne: There absolutely is a viable market, certainly from our perspective as a commercial provider. This is a market in which we provide forensic services currently and we are working with 50% of the UK police forces.
David Richardson: We would agree. There is undoubtedly a viable market. Not only are we also working with all the forces in England and Wales, but we have been able to do that in a way that we think has contributed significantly to improved service levels and improving quality, because we are all accredited to ISO 17025. Also, we have managed to drive costs down quite significantly. The paper that came out in December 2009 about protecting the public supports exactly that.
Q82 Stephen Metcalfe: Is that market totally driven by police spending or are there other factors?

David Hartshorne: The UK market for forensic testing is largely driven by police expenditure. Similar services are provided to other customers but, essentially, yes, it is driven by police expenditure.

David Richardson: That is very much our experience as well, although there are increasing opportunities overseas and also a number of opportunities outside the direct police market. It is important that that market has stability for the future if the private sector provision is going to continue to invest at the levels it is doing at the moment. I know the Committee looked at the issue of police insourcing of forensics work when it last met, and doubtless we will look at that again. That is an important factor in the sustainability of that market.

Q83 Stephen Metcalfe: Do you see it as a shrinking market, not necessarily the science itself but the amount that is being spent outside police forces? Have you experienced that and do you see it as a shrinking market?

David Hartshorne: We do see it as a shrinking market at the moment. This has been influenced by a number of factors. One is that the procurement exercise that has been ongoing for a number of years has been driving down prices. So the amount of expenditure is affected as a result of that. We also see that there is a restriction on expenditure as a result of public procurement and public expenditure restrictions at the moment. Overall, there has been a reduction. We are also seeing some in-house work provided by police forces, which, again, is restricting the amount of external expenditure.

Q84 Stephen Metcalfe: That is the same with the private sector.

David Richardson: Yes. The Minister said quite recently that the market had come down from around £170 million to about £110 million. That, of course, is simply the market that is currently outsourced by the police and not all the stuff that they already do in-house.

Q85 Stephen Metcalfe: Has that affected your businesses, and, I suppose, if it has, has it affected your profitability?

David Richardson: It has certainly affected our business in the sense that we are carrying quite a large amount of spare capacity at the moment that we have continued to maintain, initially, with the continuing tendering of work being expected and now, of course, in the light of the decision to close the FSS. So it has had an effect on us from that perspective.

Q86 Stephen Metcalfe: Has the National Forensic Framework Agreement caused fragmentation of provision and competitive pricing at the expense of scientific rigour?

David Richardson: We would absolutely say that it has not. LGC operates in a number of scientific markets. Forensics is not the only science market in which we operate. Scientific rigour is at the absolute base—the foundation—of everything we do, both in forensics and also as the National Measurement Institute, which we are also. No, it has not impacted.

David Hartshorne: With regard to the procurement exercise and concerns about it impacting on scientific rigour, absolutely not. The procurement exercise dictates some very good quality standards by which police forces and we need to be able to work. In that regard, you might argue that the procurement exercise is raising some of the quality standards in forensic science provision.

The other issue you made reference to is fragmentation. The procurement exercise has allowed police forces to procure their work in different packages. In so doing, it has opened up the marketplace to a broader range of service provision, allowing some organisations to specialise in particular areas and some organisations to provide a comprehensive range of services. Overall, we would say that that increased level of competition is bringing improved levels of service and improved levels of value for money for police forces.

Professor Fraser: We need to be careful about what we mean by the word “fragmentation” here. It may not be affecting the commercial aspects of the market. The dominant approach to using forensic science effectively in the past 10 years or so has been to integrate the science into the investigative process. It is clear that using multiple suppliers in a single case is fragmenting those processes.

Professor Sir Alec Jeffreys: I cannot add anything to that.

Q87 Stephen Mosley: Which forensic services are profitable and are there any services that are provided in the private sector that are not profitable?

David Richardson: It is right to say that, inevitably, the profitability varies between the services that we provide. To pick up on the point that has just been made, sometimes it is right that we would provide services at a lower degree of profitability because it is part of a comprehensive service to the police forces. We have over 70 different forensic science services that we offer, and some of those, clearly, we offer because they are part of an overall package.

David Hartshorne: I would agree with that. The procurement exercise requires us to provide a broad range of services. Some of those are more profitable than others, but they are all required to be able to provide a comprehensive investigation service. As a commercial organisation, we would hope that all the elements of a service provision provide a contribution, but it will be variable depending on the particular services being delivered.

Q88 Stephen Mosley: Mr Richardson and Mr Hartshorne, what sort of turnover do you have in the forensics market and what sort of profitability do you have on that turnover, if that is not sensitive?

David Hartshorne: We have just published our accounts for the last year. We turned over £26 million across our business and returned a profit of £4.5 million.

David Richardson: We have a total turnover for the entire group of £130 million. Of that, forensics is probably of the order of £30 million-odd, perhaps a
little bit more than that. The profitability of that, clearly, has varied a fair bit over the years. It has been a difficult year this year, but it is still healthy.

Q89 Stephen Mosley: Professor Jeffreys, in one of your previous answers you talked about R&D. Do private companies have any incentive to invest in R&D at all?

Professor Sir Alec Jeffreys: They certainly have an incentive to invest in R&D right down at the end of that translational line, from academic research right the way down to providing a forensic service. It is very important for them to invest in that final stage of getting absolutely perfect systems up and running. But there is a whole swathe of research activity which I don’t think they would wish to invest in and probably don’t have the resources to be able to invest in, particularly in a restricted market like this. We have just heard the profit figures. These are not gigantic sums if you start thinking about carrying out rather more basic research.

Q90 Stephen Mosley: Do you think that private sector investment will increase or decline over the next few years?

Professor Sir Alec Jeffreys: I suspect it will remain static in this very competitive market. I have made a very strong argument that there is a role for additional funds to come in, to keep the science vibrant and to ensure those new discoveries start moving down the pipeline towards new forensic implementations.

David Richardson: Perhaps I could comment on some of the research that we are doing at LGC at the moment. We spend between 5% and 10% of our forensics revenues on research every year. We currently have about 230 research projects under way, of which over 70 are in forensics alone. We collaborate with 24 different universities and academic institutions. We have published 81 papers over the last year or two, of which 25 have been in forensic science, and a very large number of technical notes as well. From our perspective, we see investment in R&D, particularly at the front end but throughout the research chain, as being very important, both to our credibility as a provider and, frankly, to our commercial success in the longer term.

David Hartshorne: I would agree. The delivery of forensic science for us as an organisation is such that it is absolutely vital that we continue to bring the best quality science through to the delivery of services. Our R&D tends to be more at the development stage. To bring scientific techniques through to the criminal justice process requires huge amounts of validation and development. That tends to be where the focus of our research is. We spent about £1 million last year on R&D, but not just around those validations. Over the years, we have been involved in developing significantly some of the DNA technologies that are used, and we have a number of R&D projects at the moment looking at other areas of forensic science, particularly to do with increasing detection sensitivity and increasing our ability to be able to provide results quickly and rapidly to police forces, which is what is required to assist within investigations.

Q91 Stephen Mosley: Do you feel that you will be able to step into the gap if the FSS closes?

David Hartshorne: When you say “step into the gap”, are you talking about R&D?

Q92 Stephen Mosley: In R&D specifically, yes. David Hartshorne: With R&D, we see a need for a whole range of different R&D requirements. We provide a specific role there, as I have described, more to do with the development of technologies. We need to work very extensively not only with people in academia but also within other commercial environments, also right down to working with organisations that are involved in developing new pieces of equipment and detection processes that we can incorporate and bring to the criminal justice process. It is not a job that we can do alone. It needs to be done alongside a whole range of R&D activities outside our organisation.

David Richardson: An interesting example is that we are currently working on a process that will enable the police to get a DNA profile within an hour. At the moment it takes a lot longer than that. That, clearly, has a huge relevance to a criminal investigation. The basic science for that was done in our DNA sequencing operation in Berlin, so it was done outside the pure forensic science division. That illustrates the point that David has just made.

Professor Fraser: It is important that the Committee has a clear understanding of the research and development environment. There are three important perspectives. The first one is international, the second one is research versus development, and the third is the historic position of the FSS. It seem to me to be rather clear that, by any objective measure of the amount and quality of R&D that is currently going on in the UK, it is inadequate. The funding, the structures and the history of collaborations are not there. It is quite clear that commercial providers will develop products and will research some products. But I think Sir Alec was making the point that the fundamental research requires funding that is simply not provided by the research councils in the UK.

Q93 Chair: Superficially, this looks like worsening the situation.

Professor Fraser: Yes. It will make it worse because the FSS were the biggest publisher of peer review papers in the UK until recently. They are not now. Of course, they were in quite a privileged position because they had access to Home Office money that the other private providers did not have. Unless the current commercial providers are going to provide those funds, there will be a gap. If you take the perspective of the European Network of Forensic Science Institutes as the first one, they set up a research and development committee in 2006 that I chaired. The formal position of that committee is that the level and quality of research is inadequate, and the focus of the research is wrong. There is a lack of strategy, leadership and funding.

If you take one more external perspective, the international perspective, and look at the report of the National Academy of Sciences, which was published in 2009, it is quite clearly set out in that report that
Q94 Pamela Nash: What we have just discussed is what I was going to ask you about, and specifically research in the universities in the UK on forensic science. Professor Fraser, you have spoken about the state that is in at the moment. Could you talk more about what impact the closure of the FSS will have on that research?

Professor Fraser: It is hard to predict, but it certainly won’t improve it in any way because, historically, they produced a great deal of research. Their research outputs have been dwindling. From what I can see, the figures are very difficult to get because you have to use search engines and the precise means that you use to search determines the figure. The figures that I produced for this Committee are sufficiently useful to make a comparative judgment.

To give you an idea of the FSS research outputs for last year, they are more or less the same as the centre that I run. That is 1,500 people versus nine academic staff and fewer than 20 researchers. It is a tiny number of publications. Many of the FSS publications are not peer reviewed. The baseline that we have to measure this against is peer reviewed papers, because that is where the new knowledge comes from that needs to link into knowledge translation and development in the commercial providers. The academic sector needs to produce that new knowledge that is then recognised by the commercial providers. The academic sector needs to produce that new knowledge that is then recognised as, potentially, valuable in all sorts of dimensions, one of which would be commercially.

To do that, you need effective collaborations, and there is no history of effective collaborations. Furthermore, the enormous growth in forensic science programmes in the UK in recent years has led to a rhetoric about research that is simply not supported by any data. Most universities have published almost nothing in forensic science. There is no real tradition. The numbers are extraordinarily low. Many have published no papers whatsoever in 10 years. There is a need here to develop a culture of research. There is a need for funding and for some form of agreed strategy, and there is a clear need for leadership in order that this supports the criminal justice system.

The research councils talk a great deal about the “impact of research”. What could be more impact than criminal justice? What could be more interdisciplinary than forensic science? It is, fundamentally, by definition, an interdisciplinary business. It links policing investigation and criminal justice to science and other areas of activity, yet the word “forensic” is mentioned in the last five annual reports of RCUK on two occasions and there is virtually no funding.

Professor Sir Alec Jeffreys: To pick up on that, I will give you a perspective from Europe where forensic laboratories tend to be embedded firmly within universities and medical institutes. The European Union has recently awarded about €6 million to create and support a virtual forensic institute spanning Europe. If you look at the type of science proposals there that are aimed towards eventual forensic implementation, they are very exciting and imaginative, and it is an area in which the FSS certainly used to be involved, maybe about a decade ago, but that interest and intellectual excitement seems to have vanished entirely from the UK scene. Very exciting things like trying to identify someone’s name from their DNA or the age of a bloodstain contributor, or trying to predict the physical appearance of an individual, are all exciting potential developments for the police. They are almost off the radar now in Britain. I think that is absolutely tragic, given the fact that this country is one of the great powerhouses of medical DNA research.

Certainly, one of the things I have not been able to detect in looking through the FSS collaborations is any clear indication that they are actually hooked in with some of these truly gigantic and powerful organisations that we have within this country. There are some real missed opportunities going on in the UK.

Q95 Chair: Just out of interest, in the two private sector organisations here, how many of your employees would have single disciplinary qualifications and how many would have forensic science degrees? I am not trying to create a gap between the two sets of witnesses here.

David Hartshorne: I am not sure I have the numbers to be able to provide an answer to that. Our preference, generally speaking, is to recruit people with good science degrees as opposed to those who have gone through a first degree that is forensically motivated.

David Richardson: About 12% of our staff have PhDs and about 60% overall are graduates. I would agree entirely that our preference is very much to recruit good scientists with good science degrees rather than people necessarily from forensic science courses.

David Hartshorne: Let me come back. Clearly, in delivering science, it is important that we have a high scientific content. 70% of our staff are active scientists.

Q96 Chair: Isn’t this something that the university sector needs to think about in terms of supplying the needs of the market?

Professor Sir Alec Jeffreys: Yes. Everybody watches CSI now and wants to become a forensic scientist. So they go to university and they are given a choice of about 400 degrees, most of which, quite frankly, are worthless, with “forensic” in the title. Colleagues on both sides are absolutely right. They need to recruit chemists, physicists, engineers, IT specialists and so on and then adapt them into the forensic arena, not the other way round.

Professor Fraser: I completely agree with that.

Q97 Pamela Nash: Professor Fraser, you seemed quite clear in your response to my question that the closure of the FSS will almost certainly have a negative impact on research and development. Is there
any possibility in your mind that the dominance of FSS might have provided a barrier to growth of R&D in the sector?

Professor Fraser: Yes. That is an issue as well. You asked a question specifically about the FSS. In their recent guises, as they became an agency, they have been quite a difficult organisation to work with when it comes to research. They are very protective. We have had instances where the research has just fallen by the wayside. The move towards a commercial organisation has restricted the research focus and their willingness to exchange information.

These collaborations are really quite difficult to manage but not impossible. If you look at a company like Philips, they have a huge R&D programme. They work extensively with universities. They are very effective at exchanging information for research and development, so it is not impossible. The research culture in the UK at the moment cannot support those collaborations. The trust and the understanding is not there.

Professor Sir Alec Jeffreys: Could I just pick up on that? Another problem is that, if you visit the website or the annual report of any respectable research organisation, the first thing you come across is very detailed information on the research projects and so on. That is crucial; that is the shop window; that is what gets the message out and starts building up collaborations. I have spent a considerable amount of time on the FSS website and looking through annual reports and there is virtually nothing at all. That is a real concern.

One of my real concerns is the effectiveness with which FSS has interfaced with academia in a two-way process. I have doubts about that. This applies to transparency and peer review. Are they running their science programme in a way that I, as a scientist, have to do? Everything I do has to be peer reviewed, judged by my peers, and, if it is deemed appropriate, I will get the funding. I am not sure, again, that that culture is fully pervading the forensic sciences in this country.

Q98 Pamela Nash: Can I ask each of you how much responsibility do you think that the research councils have in fostering this new era of collaboration in forensic science?

Professor Sir Alec Jeffreys: Perhaps I could start on that. The major charities do not support forensic science. The research councils, by and large, do not. The Medical Research Council specifically does not, as far as I know. There has been some ad hoc funding over the years, for example, from EPSRC, but it is very ad hoc. I know of a number of academic forensic scientists whose research has to be funded for on the back of casework income that they generate. It is a very ad hoc way of doing the science. There is no central forensic budget in this country of which I am aware.

Q99 Pamela Nash: Should there be?

Professor Fraser: Yes. The issue about the research councils—I am taking some risks here—is that they will formulate their objectives on the basis of the political environment around them, and if there is no political will for this then they are unlikely to do so.

I have spoken to a number of people in the research councils. They fund some areas that overlap with parts of the forensic science with which the people here are familiar. So there is funding for things like security research. A great deal of that is around very narrow areas, say, digital evidence, detection of explosives and so on and so forth.

With regard to the broader issues, the real need for research, in my view, in forensic science has to balance the science and the procedure on investigative issues linked to criminal justice outcomes. That is not a proposition that any research council will respond to, until the political will is developed that shows that that is something that is desirable.

David Richardson: I would like to pick up on that. The linking of that research to the actual use of this in the field by the investigating team is absolutely critical. That is why the partnership between academia and people like ourselves, who are providing those services to the police, is absolutely critical. To link this matter back to the question of the market that we touched on earlier, we need to have a stable market of a sensible size that will encourage the private sector to invest in the research and development activities if we are going to have a sustainable and really meaningful R&D operation in forensic science in the UK in the future.

David Hartshorne: I would add that we will continue to fund the very targeted R&D and validation work that we do, but that really cannot be done in isolation with other organisations. We would absolutely welcome some more centralised funding.

Q100 Pamela Nash: Finally, I want to ask you about the future of our forensic scientists in the UK. Do you think that the closure of the FSS will have a major impact on the next generation of forensic scientists in the UK, being a major employer?

Professor Sir Alec Jeffreys: Yes. It will scare off the new people coming into the field. There are many people going to universities who want to study forensic science. They are suddenly realising that they are in a market where the opportunities for employment are dwindling. We have certainly seen in the context of the pending closure of the FSS some real howls of anguish from the younger members of our substance there. So, yes, I think it will choke off opportunities and developments in forensic science in the future.

Professor Fraser: The situation is inflated, anyway. There is a fashion for forensic science at the moment that is, frankly, unhealthy. Most of the educational programmes are driven by the business needs of universities and not by the needs of employers. It was inevitable that this boom would bust. Maybe this is the point. When it is quite plain that the employment opportunities are much more limited, the market will then settle down to something more realistic and people coming into forensic science will go into it with some realism about what it is and what kind of education they need.

David Hartshorne: As far as the future for forensic scientists is concerned, the private marketplace will expand to provide additional opportunities for forensic scientists. That will come from taking on some people with existing experience. Also, the private sector is
very much involved in developing our own forensic scientists, taking people with good science degrees and providing training so that they are able to provide and apply those scientific disciplines through to forensic science. We will play a part in doing that. From our perspective, I hope that the opportunities for forensic scientists that we are able to provide will provide a good future and opportunity for them.

David Richardson: I would agree with that. In addition, a lot of very good science is being done within forensic science and more widely. The opportunities for the forensic scientists who do come into our sphere are going to get better. Professor Jeffreys has already suggested that there are some very interesting developments out there. So it is going to be a good place to have a career. I have no doubt about that at all.

Q101 Gavin Barwell: In the answers that you have given already, particularly Professor Fraser, you have touched on the issue I was going to raise, which is collaboration between the FSS, academia and private companies. Could I invite you all to say a little more about how you think the change in the FSS to a more commercial entity affected its collaboration? I believe you have already touched on it, Professor Fraser. Do you want to elaborate on that?

Professor Fraser: I will expand on that and make the answer slightly more general. I need to say that I do not have any particular provider in mind when I make these comments. The centre I am involved with is in a chemistry department, and the chemistry department has very strong links with industry. It works with big pharmaceutical companies. It has no difficulties working with them. Yes, they have commercial issues. Yes, there are issues of intellectual property and so on and so forth, but universities know how to deal with that. It is not problematic, but it is problematic in forensic science. The collaborations seem to be very immature. There seems to be an expectation that there is imbalance in the intellectual property.

I have a concern that the commercial providers in forensic science, in general terms, have yet to realise how this works. Those who are engaged in commercial science more generally are better informed about this, but some that are coming in as new forensic science providers are not very well informed and they have to get smart about how to share and trust, and how then to make the research translate into development, which is where the benefits are going to come to the commercial world and the criminal justice system.

Q102 Chair: But Gavin’s question specifically is: has it got worse since the restructuring of the FSS?

Professor Fraser: Yes, it has got worse.

Q103 Gavin Barwell: In relation to the FSS.

Professor Fraser: In relation to the FSS, it has, and there are general difficulties, anyway.

Q104 Gavin Barwell: So there is a problem, generally.

Professor Fraser: There is a general problem and it has got worse. The FSS are very protective about their information. I probably should say no more than that. They can be quite difficult to deal with.

Professor Sir Alec Jeffreys: I can add one fact to that, which I know about. The FSS does have, ongoing, about 50 academic collaborations formally signed off. How that compares with five or 10 years ago, I have absolutely no idea.

Q105 Gavin Barwell: Are they collaborations with other companies?

Professor Sir Alec Jeffreys: No. These are academic collaborations. Looking down the list, I would again make the point that I see missed opportunities there. A lot of these collaborations seem to be aimed towards the very final stages of forensic implementation, of tweaking the technology and reflecting rather less the more upstream, potentially more exciting areas that could generate major revenues in the future.

David Richardson: It is fair to say from a commercial perspective, obviously, that the FSS is a competitor of ours in competing for contracts. We have probably found academic collaboration to be more fruitful. I would agree with that.

David Hartshorne: I am not in a position to comment on the FSS’s position. As far as we are concerned, as I mentioned earlier on, the future of our innovation is about being able to work with external organisations and academic organisations.

Q106 Gavin Barwell: I want to pick up quickly on a couple of things that came out of the questions that Pamela asked. Professor Fraser, you were making the point about the lack of research council investment in forensic science. You said that you didn’t think that would change until there was a political will to change.

Professor Fraser: Yes.

Q107 Gavin Barwell: Would you expand a little more about what you mean by the phrase “political will”, because, in terms of how the research councils allocate funding, that is not a decision the politicians get involved in because of Haldane. When you said “political will”, what did you mean?

Professor Fraser: Essentially, I mean the aims of the Government and the aims of the various political parties. For example, many of the areas of research, quite understandably, are on things like ageing and climate change, because these are matters of considerable importance. If forensic science or science and justice was considered to be of political importance, then the research councils would respond to that.

Q108 Gavin Barwell: Professor Jeffreys, you mentioned the EU funding to set up a virtual collaboration. Has any of that funding come to the UK?

Professor Sir Alec Jeffreys: Yes, to two groups, neither of which, I believe, are directly involved in the hard science aspects of it. One is bioethics.
Q109 Chair: Is the problem, Professor Fraser, the lack of clarity about who the customer is in forensic science?

Professor Fraser: It may be that that is one of the issues. The research that needs doing needs to blend the science, the policing issues and the issues to do with the impact that that science might have on criminal justice. For example, nobody knows how much contribution that forensic science makes to criminal justice. I am not aware of a single research study that has examined that issue, yet we all believe and have a positive view of it, because in individual cases it can be incredibly impactive.

Let us take a slightly different approach and ask, “What difference does it make in say, volume crime, in burglary and car crime?” What difference would investment in forensic science make? We don’t know the answer to that question. At a time when we are looking at constrained budgets and reduced funding, it may well be that there is more sense in investing in that than there is in investing in other things.

David Richardson: I would like to make a comment. We have commissioned some independent research. A random statistic from that research is that a single Police and Criminal Evidence Act DNA sample that provides a profile costs about £270. We have estimated that that can save up to about £700 in police time and about £800 in court time if it leads to a guilty plea. So it is about 90% of the court’s time if there is a guilty plea. It is an individual statistic plucked from the air, but it is just indicative of exactly the point that Professor Fraser is making.

Q110 Gavin Barwell: I want to ask a little about mentoring of people coming into forensic science. One of the points that was made to us by FSS staff was that, because of the breadth of the work that is done there, there is a huge opportunity in terms of mentoring new people to the profession, essentially. Do you believe that the private competitors have the capability to train and mentor forensic scientists in the same way? Do you have the scale of operation that allows you to do that?

Professor Sir Alec Jeffreys: I will start as I am not with a private company, the answer is absolutely yes. They do it all the time.

David Richardson: We have over 550 people in our forensics division. We are accredited in six laboratories on a huge range of methods. We are absolutely able to do that.

David Hartshorne: About 50% of our staff have over 10 years’ forensic experience. They bring that experience to the new people that we are training. All work involves peer review.

Q111 Pamela Nash: I ask this question of all of you. In your opinion, what country, or devolved administration, has the best model at the moment for forensic science provision? Is there something that we should do? The example that I have raised is the European model already. First of all, I don’t think there is a perfect country. They are all flawed. Forensic science right across the world is significantly underfunded. The United States recently took the view that, despite the major commercial presence there, it was important for the federal Government to play a proper role in the provision of forensic science research. That led to the creation of the National Institute of Forensic Science. That is a very good model, rather analogous to this virtual forensic institute that is in Europe, that deserves very serious consideration for the UK. It does not have, necessarily, to be an enormously expensive activity, but it should be an activity where you are properly interfacing with academia, with interesting new ideas coming through, and then also fully interfacing with the commercial sector. That would give, potentially, a very effective conduit for new forensic developments.

Q112 Pamela Nash: In that case, keeping it as a Government institution that works with the private sector but which would not necessarily be a Government body.

Professor Sir Alec Jeffreys: Yes. I don’t know exactly what is happening in the States, but that is certainly the model I would envisage for the UK.

David Richardson: I agree that improvements could be made, undoubtedly, but the UK has a very good model. Let me give two examples. We do work in Germany. The required turnaround time for a PACE equivalent sample in Germany is something of the order of six weeks. The fastest you can get it done in the US—I got this directly from a very senior sheriff quite recently—is about six to seven days. We regularly do it in three days. We can do it in a day and we are working on technology that will do it in an hour. That is the difference between our model in the UK and what it has produced and what other people do.

Q113 Pamela Nash: I take it you mean England and Wales when you refer to the UK.

David Richardson: I beg your pardon. In England and Wales, of course, yes.

Q114 Pamela Nash: And also prior to the FSS closure or afterwards.

David Richardson: I can only speak about what we have been doing. Certainly, the FSS is part of delivering that very quick service, yes. They operate to the same requirements that we and our competitors do.

David Hartshorne: I cannot speak for a number of other countries, but we do provide forensic services in the United States, where there is very little use of the private sector. As a result, there are enormous backlogs. It is not uncommon for rape investigations, for example, to have to wait over six months before work might start. What is unique here in the UK, and certainly in England and Wales, is not just that we have a private sector providing services but that we provide some of the highest levels of customer support, some of the quickest turnaround times and some of the highest levels of sensitivity for analysis. The model that operates here has delivered some very good quality services for police forces.

Professor Fraser: Historically and probably currently, England and Wales has the highest quality of forensic science in the world. That is widely shared around the
world as well. There are interesting emerging models in Australia and the United States. It would be very interesting to see what will happen because the National Institute of Justice (in the USA) is now funding research, development, standards and accreditation. So it is a very expansive programme. I would foresee that more sophisticated forensic science is going to come from the United States. It may well be that, in the future, we will be taking a lead from the United States.

Q115 Pamela Nash: Finally, the information that we have been given during the period of the inquiry has led us to believe that the FSS was quite a heavy hitter on the international stage as well as in the UK. What is your impression of the impact that this closure has had internationally?

Professor Sir Alec Jeffreys: The response that you have, doubtless, seen in the press and so on from the international community has been one of extreme alarm and astonishment at the closure. There is a legacy issue here. In my view, the golden days of the Forensic Science Service were back in the 1990s, up to about the year 2000, where their contribution particularly in the development of DNA techniques, the National DNA Database and so on was exemplary. That legacy has drifted away a bit, pretty well in parallel with the shift towards full privatisation. It is, sadly, fading.

Pamela Nash: Is there anything else that anyone would like to add? In that case, thank you, gentlemen.

Q116 Gavin Barwell: I want to come on to the issue of police in-house forensic labs. Are there any benefits to having them?

Professor Fraser: I would say there have to be some benefits. Speed is an obvious one. We have already heard that one of the major differences between England and Wales and the rest of the world are the very fast turnaround times, which are a consequence of the positive aspects of the relationship between the police and the forensic science providers. They might also bring economic savings. The potential risk is that they (the in house services) must be done to the same quality and standards as the laboratories that are providing analytical services. It seems to me that not to do so would present an unacceptable risk to criminal justice. I can see some benefits, but there are things to be managed.

David Hartshorne: Our experience of providing cost-effective, high quality forensic services is to concentrate your efforts in a limited number of facilities. That is one aspect of being able to deliver profitable forensic services. That is not just because you concentrate your expertise in one place, but it is much easier to be able to control the quality issues of delivering high quality forensic services. Our belief is that, if you want things to be done very quickly and to have things done at high quality standards, concentrating on one area and maybe focusing your efforts in the movement of samples and exhibits through to a centralised location is, perhaps, the most efficient way of doing high quality forensic science.

Q117 Gavin Barwell: Is that a no?

David Hartshorne: I think that Jim raises some relevant issues to do with speed. It is true to say, as you will be aware, that police forces do all their fingerprint analysis in-house currently.

Professor Sir Alec Jeffreys: I am trying to think of any benefits. Other than speed, no. The costs are very clear. There is a duplication of facilities and a real risk of potentially running a technology that is not fully accredited.

David Richardson: I would certainly agree with the comments that have been made about the importance of accreditation. The regulator has suggested that police laboratories would need to be accredited by 2015. Frankly, I do not think that we can go through the next four years with moving work back from accredited facilities, where it is being done at the moment, to non-accredited facilities.

The only other point I would make is that we do work very closely with the police laboratories as well. To my mind, they provide a very important input to the process, particularly at the front end. So a successful provision of forensic services is about working closely with the police, including the police labs.

Q118 Chair: In your earlier response on mentoring, you seemed to be arguing that it was the scale of your operation that enabled you to have that all-encompassing mentoring and bringing people in with individual specialisms and developing them into forensic scientists. Surely, a relatively small police laboratory could not do that?

David Richardson: It is a challenge for them, undoubtedly.

Q119 Chair: Have you any evidence of it happening in the way that is comparable to what you pride yourself on as happening in your own company?

David Richardson: We spend a lot of time talking to police scientists and helping to keep them up to speed with the latest techniques that we are developing and the things that we are doing. That is very important to us because a key issue is about the screening of evidence before it comes to us for testing. Quite often, you will find that the police, in terms of recovering that evidence, will be making very important decisions about where they are likely to be able to gain, particularly, DNA evidence, and they must be aware of the latest things that we are capable of doing so that we don’t miss opportunities to add to the evidence that is available in any given case.

For example, just snipping out the blood stain from a jacket and sending it to the lab for testing might well miss the fact that there are fibres all over that jacket that we could also do an awful lot with, with some of our latest technology.

Q120 Gavin Barwell: There seems to be unanimity on the issue of quality, but there are slightly different views on whether duplication means it will cost more or whether there could be some economies from having it in-house.

I want to come to the issue of impartiality. Professor Fraser, you stated that, if quality standards were achieved in-house, “there should be no significant implications for criminal justice”.

David Richardson:

Pamela Nash:

Chair:

Professor Fraser: I would not base any strategy for mentoring on a lack of evidence.
30 March 2011  Professor Jim Fraser, David Hartshorne, Professor Sir Alec Jefferys and David Richardson

Professor Fraser: I don’t believe so. I think the legal framework is there. It is quite clear what checks and balances there are on the police in terms of investigating crime. The issue here is about operating scientific standards and I do not have much information about this. It is quite difficult to come by information about what the police are doing or not doing. I know that the Metropolitan Police are either now accredited or very soon to be accredited, but finding out what is going on elsewhere is more difficult. I am talking systematically rather than of any individual police organisation. If those two things are in place, (the legal safeguards and accreditation) then the dominant way in which forensic science works in the UK, which is about a productive collaboration between investigators and scientists, will be maintained. The transfer of information, as has already been alluded to, is critical to that, both for the choices of the scientific analyses and the contextual interpretation of the evidence. The breaking of that chain, or the fragmentation of it by poor processes or poor standards, will mean poorer evidence going into the criminal justice system.

Q121 Gavin Barwell: Professor Jeffreys, you take a different view on this issue. Professor Sir Alec Jeffreys: Yes. This is a very tricky one. In the written submission I raised the issues of impartiality or otherwise of the police doing it in-house, but I really can’t comment beyond that, without knowing how these interactions are going on within these potentially rather new laboratories that are developing. I shall pass on that, thank you.

Q122 Gavin Barwell: Does anyone else want to comment on the issue of impartiality? David Richardson: All I would add is that both the McFarland review and research and comment in the US has raised the question, but I couldn’t comment on the specifics at all.

Q123 Gavin Barwell: I want to end with the issue of market distortion. We have some figures in front of us about the trends in the external market and internal forensic spend by the police, which show a gradual increase over the last five years on internal spend and a small decline on the external market. We heard the figures that Mr Richardson referred to at the start of this session in our previous evidence session. In year, we have seen a decline from £170 million external spend down to £110 million. Do you have any evidence of what the trend, in-year, has been in terms of the internal spend? In other words, how much of that £60 million decline is a decline in total spending on forensics this year and how much of it is an increase in internal police spending?

David Richardson: I don’t have any access to that information. Our belief, and it is our belief, is that there has been something of a reduction in total spend, but we are, undoubtedly, seeing more work being brought in-house.

David Hartshorne: We have no figures on that at all.

Q124 Gavin Barwell: Let me ask the question another way. Stephen, earlier on, asked you whether you felt there was a viable external market and you were confident that there was. To what level would that external market have to decline for your answer to change? Do you take the view that there is a minimum size for the market or this trend can carry on and it would not cause a problem?

David Richardson: Let me pick up on that first. You have to relate two things into this. The first is where you are putting the boundary of the market. For example, if one was including fingerprints within that, it is a much bigger market. The second point is about the number of providers in the market. You need to have a number that makes sure it is a very competitive market, and I believe it is at the moment. The evidence exists, both in terms of improvements in service levels but particularly in the reduction in prices over the last few years. If there are too many providers chasing that market, inevitably, that is going to result in further providers failing. One might argue that the situation of the FSS in losing £2 million a month, according to the Minister, is a product of that situation.

We say two important things. One is that, if the market decline is unarrested, that is going to be a problem, undoubtedly. The second is that bringing lots of new suppliers into this market, particularly if the accreditation is not absolutely rock solid, is going to be a problem.

David Hartshorne: I don’t think I can answer your question as to where the level becomes not viable, but we have seen a decline in the market. As we see it at the moment, the most important thing is having some level of certainty as to what the market size is likely to be. Clearly, there is an issue at the moment about the capacity that the FSS currently has and how that is going to be accommodated. We, and, I am sure, other private service providers, are poised in a position to be able to make investment, to be able to provide the sorts of additional capacity that is required. To make those investment decisions, we really need to have some understanding of where the market is likely to end up.

Q125 Stephen Mosley: Sir Alec, in your written submission, you put a detailed alternative forward that suggested maximising the transfer of the productive activity to the private sector while moving the rest of the FSS back to the Home Office. I guess from what you said earlier that that is the model that they have done in the US recently with this institute. Would the other members of the panel agree with that model as an alternative to closure?

Professor Sir Alec Jeffreys: In the United States, so far as I know, they have not done precisely that, but, nevertheless, they are creating this entity firmly rooted within the public sector which underpins new developments in forensic science.

Professor Fraser: There is a similar model emerging in Australia where there is a national institute that is linked into not just research and development but standards and operational developments, so it covers a very wide remit.

David Hartshorne: I am not sure I entirely understand the proposed model here, but, clearly, there is an opportunity for a separate area for R&D functions.
When it comes to service provision, the market, as it is developing at the moment, is for the provision of the full range of services. That is very important, as we have all here discussed today, about the continuity throughout an investigation and the lack of fragmentation. To pull separate bits out of that is quite difficult to envisage without having a detrimental effect on the total service provision.

David Richardson: Again, I am not aware of the model that is emerging in the States and how it is exactly going to end up. If there is going to be any centralised provision, the importance of having that connected to front-line policing and front-line forensic science is absolutely critical. For it to become an academic ivory tower would, clearly, not be in the best interests of forensic science.

Q126 Stephen Mosley: Can I ask the two professors here—you will understand why—if you have trust in the private sector being able to deliver the speedy and quality results that we would want from a forensic service?

Professor Sir Alec Jeffreys: They are perfectly capable of delivering, and they do deliver, exactly those results using current technology. The question is whether, 10 years down the line, when the technology could be radically different, where we have not invested in this country, will they be able to run with technologies that are almost certainly going to be developed abroad? I suspect that the United States is rapidly going to become a major driver in this game. If you look at the technology, certainly on the DNA side, that people are using now, it is terribly old-fashioned. It is round about 17 years old. It is technology with which, in the academic area, very few people do work in this way. It is already creaking a little. We are locked into that technology because of the National DNA Database, but, to emphasise the point, the science underpinning this is exceedingly rapidly evolving. I would hate to make any sort of guesses as to what might be coming over the horizon five or 10 years from now. The key factor is for Britain to be properly positioned to be able to use that and, ideally, that these developments come from this country.

Q127 Chair: Let me ask this question to Mr Richardson and Mr Hartshorne. If parts of the FSS business were marketed as a single entity, would you contemplate TUPE-ing staff across as part of the package?

David Hartshorne: You are talking about acquiring sections of the Forensic Science Service.

Chair: Yes.

David Hartshorne: At the moment, various different options are on the table as to how the work of the FSS might transition. Clearly, in the scenario that you are talking about, if parts of the work were to transfer over, then TUPE legislation would apply.

David Richardson: Yes, the TUPE legislation would apply.

Chair: I do not want to push you to say which one you are bidding for.

David Richardson: We have a very recent example. We took over the Metropolitan Police drugs work quite recently. In fact, you received some evidence at your last meeting that may not have been fully informed because the people involved there did, in fact, come to our facility. They had a number of briefings, we offered jobs to all of them, and, for a number of different personal reasons, they decided that they did not wish to work in our Teddington facility. Those jobs were made available to them. So, yes, we would absolutely stand behind that.

Q128 Chair: One of the resources of the FSS is this huge archive in Birmingham. What would happen to it if the Service disappears?

David Richardson: It is important to understand that the archive belongs to the police. The FSS look after it. We look after some elements of the police archive as well. They can ask for it to be returned at any point in time. We believe that it would be perfectly possible for that archive to be run and administered by the private sector. Indeed, our experience from a number of cold cases—Rachel Nickell and Damilola Taylor—is that we are used to working with not necessarily FSS archive.

Q129 Chair: Would you concur with the view that it is important that that archive is kept together as a single entity?

David Richardson: We think that various models could be made to work. I don’t think it necessarily needs to be a single entity but, clearly, it would make administration easier.

David Hartshorne: There are two parts to this archive. One is to do with evidence and the other is to do with the case files associated with it. A more common approach nowadays is for evidence to be returned to police forces, but case files would remain with the supplier. There are arguments for both approaches to be considered when looking at this current archive, but there is no reason why it could not be maintained either in the private sector or by the NPIA, for example.
Q130 Chair: Finally, how can you make a profit out of cold case work?
David Hartshorne: In the same way we would make a profit out of all the forensic work that we undertake. There seems to be a misconception that the private sector won’t do complex casework or do cold case reviews.

Q131 Chair: So tell us. How do you make a profit out of it?
David Hartshorne: Just as with all forensic work, the work is charged according to the work that is undertaken. That is no different in a cold case as it would be for any other forensic case that comes to us immediately after the offence. There are product codes associated with delivering services. Some of them are hourly codes. It is more likely, in a cold case review, that you might be doing hourly codes. Let us not forget that much of the cold case review involves, as far as the scientific developments are concerned, going back and re-doing some of the work with modern advancements in DNA technology. All those techniques are currently applied in everyday cases nowadays.

David Richardson: I would agree with all of that. It really is just a case of applying new thinking, new strategies and certainly modern techniques to some of this material. Indeed, there has been an ongoing review of cold cases over the last few years and a number of those have become public in terms of the successes that have been had with re-investigating old material.

Chair: Thank you, gentlemen.

Examination of Witnesses


Q132 Chair: Good morning, gentlemen. Thank you for coming to see us this morning. I am not sure how much of the previous session you heard, but we are covering a number of questions based upon some of the evidence that you submitted and some derived from other people’s evidence. First of all, for the record, I would be grateful if you would introduce yourselves.

Dr Bramble: My name is Simon Bramble. I am currently head of Police Science and Forensics at the NPIA. I started my career at the Metropolitan Police Forensic Science Laboratory 20 years ago. In 1996, I found myself in the FSS. In 2007, I moved to my current position. I am currently responsible for supporting the Police Service in running national services around the DNA Database, forensic pathology and also supporting the police on business change with the Forensics21 programme.

Roger Coe-Salazar: Good morning. My name is Roger Coe-Salazar. I am the Chief Crown Prosecutor for the CPS South East region. I also sit as a CPS representative on the Forensic Science Advisory Council in support of the regulator.

Gary Pugh: I am Gary Pugh. I am the director of Forensic Services in the Metropolitan Police and I currently chair the National DNA Database Strategy Board. Previously, I was a director on the main and executive boards of the FSS.

Chief Constable Sims: I am Chris Sims. I lead for ACPO on forensic science. I am chief constable of West Midlands Police.

Q133 Chair: Thank you very much. What advice did your respective organisations give the Home Office on the FSS closure?

Chief Constable Sims: We work with the Home Office on a committee that oversees forensic science. It has slightly moved on now in the last couple of months, but we are part of that committee. For some time we have been concerned about the volatility of the forensic market. Last summer, we commissioned a piece of research through PricewaterhouseCoopers to look at the market and to help build a picture about its current strength and future development.

Q134 Chair: What were the terms of reference of that report?

Chief Constable Sims: I would have to look them up to give you the exact terms of reference, Chair.

Q135 Chair: Would you be kind enough to send them to us?

Chief Constable Sims: Essentially, they were to understand the current market and to look at possible future scenarios in terms of the risk that they may impose. That was the basic plan of the work. That piece of work came to fruition in the autumn, and a lot of the base data that decision making was built upon came from that report.

In terms of your specific question, clearly, the decision is a Home Office decision. The discussion with ACPO was to get a view of the degree to which we thought the position was manageable should the FSS be brought to a conclusion.

Q136 Chair: So you did not press them to close it.

Chief Constable Sims: Absolutely not. Very clearly, it was not our decision. It was very much about the consequences.

Q137 Chair: What about the other panellists?

Gary Pugh: I would echo Mr Sims’s views. I also contributed to the PWC report and the discussions around that report in terms of the current development of the forensic market. It is also fair to say that we had raised some concerns with the Strategy Group, chaired by the Home Office, that Chris refers to, about the forensic market and its stability going back to
2007. This was not a new issue, but it came to a head and to fruition in the report that was conducted in the autumn.

In answer to your direct question, I played no part in the decision but I contributed to that report.

Q138 Chair: Did you argue for it to close?
Gary Pugh: No.
Roger Coe-Salazar: Your question, Chair, was to do with what advice the Department provided, if I recall correctly. So far as advice was concerned, the CPS were informed about the proposed closure of the FSS right at the very end of November. The advice, and I use that word very loosely, was that provided was via the Attorney-General’s office, which was a mechanism of highlighting the risks that would be presented to the criminal justice system should that closure not be managed in an appropriate and proper way. There was no further advice outside that.

Dr Bramble: I would like to echo pretty much what my colleagues from ACPO have already stated. The NPIA also had a place at the Forensic Strategy Board, chaired by the Home Office, and have been there for a number of years. We have been participating in those debates. Again, it wasn’t anything new. To answer your question directly, the NPIA were not consulted over the decision to close the FSS directly. We did not have anything to do with the final decision.

Q139 Chair: One of the things that we are finding it difficult to get our heads around in this inquiry is the fact that there is a forecast that suggests the forensics market is going to shrink. This is happening?
Chief Constable Sims: It is quite a complicated question. It is not straightforward. For one thing, the market itself was artificially stimulated during the DNA expansion fund period. Money was put in to grow the database, so the market had an artificial peak to it.

Secondly, it is a very dynamic market, and the composition of what we do within forensic science changes very quickly as the technology changes. An example is that not too long ago we would have bought from FSS and other suppliers all of our work around ballistics. That would have been a reasonably large spend area. As technology moves, as it is now an IT-based approach to forensics, that is now an IT system that is owned within the Police Service. Therefore, the spend does not appear in the way that you suggest.

We have definitely become hugely more efficient in the way that we make decisions about submission. The whole tendering competitive issue within the market has driven down unit costs which deflate the amount of spend.

The final factor, of course, topically, is that every police force is facing a 20% cut in budgets. In a sense, that has been anticipated in the current year and it is beginning to impact on this area, as it does on everything else.

Gary Pugh: I echo the point that there was a very significant investment in the DNA expansion programme that, effectively, increased the size of the market. It is also worth bearing in mind that, of the police force spend, and certainly in the Metropolitan Police, 60% of it is related to DNA profiling. So a reduction in the unit cost of DNA profiling obviously has a significant impact on the size of the market.

Q140 Chair: The volume of work is not going down. It is the issue around DNA in all of its aspects.
Gary Pugh: Yes. In terms of demand, certainly in some areas, we have seen quite significant reductions in areas like burglary and vehicle crime. So we are seeing some reduced crime flowing through in terms of the demand to forensic science providers.

Dr Bramble: To add to that, there is a change in the mix as well. We are coming to a threshold. There is growth in the digital market, whereas in the traditional market, through the experiences which have just been outlined, there is some movement there.

Roger Coe-Salazar: In addition to the procurement framework having driven down cost, there is also a perspective from the end user. That is that approximately 70% of all cases in the Crown court result in a guilty plea. It is a fundamental waste of public money, including using money on forensics, to build full cases when in actual fact you have a market—I use the term “market” very loosely—where 70% of it does not need a full file. It does not need full forensics. That has also happened over the last three or four years. There has been a real push towards proportionate file build. It impacts on police file builds in other respects as well, and very positively, but also having regard to forensics. Less is being asked for because, when it is asked for, it is asked for later in a greatly reduced number of cases. I suspect that that has also had quite a large impact. There is no reason to suggest that that direction of travel is going to change.

Q141 Chair: Can I ask you, specifically, Mr Coe-Salazar, have the Ministry of Justice and the associated community been reticent in ensuring objectivity and quality of forensic science?
Roger Coe-Salazar: No, I don’t think they have. If by “objectivity” you mean making sure that the provision of forensic science is a proper, professional objective assessment of the evidence, then absolutely not.

Q142 Chair: You seem to have a lesser influence than perhaps you should have. Is it because you are not paying for the service?
Roger Coe-Salazar: We don’t pay for it. I know one of the questions from one of the earlier sessions was to do with who the customer is and whether that is getting in the way. Yes, the paymaster tends to have a large say in relation to matters, but in actual fact you are not paying for something and the person does not deliver against whoever is paying them. They deliver an independent objective service. They happen to be paid for that from public money.

Q143 Chair: This is a complicated situation, is it not?
Roger Coe-Salazar: Yes.
Q144 Chair: When an investigation is going on, clearly, the police are the customer, but when it comes to the prosecution, as one forensic scientist put it to us, the jury is the customer.

Roger Coe-Salazar: It depends at what stage of the process you ask the question. If the police are the paymasters, they will receive that forensic evidence in. But, at the point of charge, the prosecutor has to make the decision whether or not something should be charged, and part of that evidence assessment is the forensic evidence. If we take the view that that forensic evidence, for whatever reason, is not properly impartial, or of proper integrity and has not been properly validated as a science, we won’t use it. Therefore, at that point in time, one could argue that the prosecutor is the customer. If we then decide that all of those elements have been complied with, and we are satisfied that it is fair and just to utilise that piece of evidence in the court arena, then the court also becomes the customer, and, in due course, getting to trial, if that is the eventual outcome of the case. It rather depends at what point in the process one asks the question.

Q145 Stephen Metcalfe: Mr Pugh, you, I believe, said that the forensic landscape is now much more fragmented, with little or any wider strategy or policy agreed by all the stakeholders. Is that still the case? Is there a strategy or not in the UK? We have heard about the Strategy Board. Do we have a strategy?

Gary Pugh: Not across all the stakeholders. Certainly within the Police Service—Simon can talk to this—we have developed a strategy to do with forensic science, and we have been pursuing that for the last five years or so.

Dr Bramble: I will pick up from that. There was a strategic framework for forensic science. It was sponsored by Chris Sims’s predecessor, the chief constable from Lincolnshire. That created a pragmatic approach to implementation at the Police Service level and generated phase 1 of the Forensics21 programme. As phase 1 of that programme began to come to fruition at the end of 2009, ACPO, with our support, did a review of the environment, utilising Northumbria university, which provided a wide consultation across the landscape. That enabled us to make important decisions about phase 2 of a pragmatic programme for Forensics21.

More recently, given the phasing out of the NPIA and the decision about the Forensic Science Service, Chris Sims has asked us to review and report back quickly to the ACPO Portfolio Board on 15 April this year with revised recommendations for any changes to that strategy. I echo Gary’s comments that, in the Police Service, we have a very pragmatic approach but it is across the service. It does not involve the wider stakeholders in that engagement.

Q146 Stephen Metcalfe: I am still not clear what the actual strategy is.

Dr Bramble: The strategy is a very pragmatic one. The first phase was benefits-led. There was a whole range of opportunities. There was a statement. I can tell you what Tony Lake, the chief constable then, had as his objective. It was: “To produce a coherent and objective set of forensic services, skills and capabilities within the Police Service and Partner Agencies, which deliver continuous improvement in policing outcomes to quality assured standards, and provide demonstrable and increasing value for money.”

We turned that into a programme which created the framework under which we started to procure. We started to harmonise business processes. We transferred the National DNA Database from the Forensic Science Service to the NPIA, and we put in place the National Footwear Reference Collection and some other things. That was the first phase.

Q147 Stephen Metcalfe: That is the strategy that has been developed for ACPO rather than for the whole UK market.

Dr Bramble: Yes.

Q148 Stephen Metcalfe: Is there a strategy outside that, or is that what you mean when you say it has not engaged with all the other stakeholders?

Chair, the key features of our strategy are about quality, value for money and innovation. Obviously, each of those has a dimension that touches other players within the forensic arena, but ACPO is not in a position to set a strategy for providers, academia or, indeed, for Government. In a sense, we influence but we cannot manage the environment.

Q149 Stephen Metcalfe: Some people believe that the strategy should be slightly different, that ACPO should act as the customer, define its needs and then let the practitioners in the market provide the service, but that is not what you believe should happen.

Chair, Constable Sims: That is partly what happens. If you look at the innovation work, we have got much sharper in trying to inform the wider market, which includes, obviously, an academic and overseas market, what is useful to policing and, therefore, what should drive innovation. We have worked on the quality end with the new regulator and are driving quality standards progressively through that part of the market that sits within policing and building it in as a requirement to that part which we purchase. We can be very influential in the strategy, but it is not for us to set an overall strategy because that is not within my remit.

Q150 Stephen Metcalfe: You have talked about quality standards. Someone is quoted as saying that knowledge of forensic science within the Police Service is poor.

Chair, Constable Sims: No.

Q151 Stephen Metcalfe: You don’t agree with that.

Chair, Constable Sims: Of course it is variable. We have experts who are, probably, in their field the most expert people in the world. Equally, we have lots of generalists whose knowledge, quite properly, is limited to understanding what surface might yield a fingerprint and what a DNA stain might be derived from. I don’t need 120,000 police officers to understand what a double helix is, but I do need them
to be able to fit within their role as evidence gatherers and understand what their part is in a chain of delivery.

Q152 Stephen Metcalfe: Would you accept that there is room for improvement and that you are working towards that improvement?
Chief Constable Sims: What would you say good knowledge should be in the Police Service?

Q153 Stephen Metcalfe: That is a good question. It is the accreditation. It is how aware the Police Service is of the importance of the forensic services. Is it providing the same robust service to the police that practitioners outside the Police Service can provide, and do you guarantee that?
Chief Constable Sims: You are touching on accreditation here. We are driving a process of accreditation through the regulator, through all of the work that we do, and requiring it of all the people that work for us through contract. There is a good awareness within the Police Service of capability of forensic science. It is the most dynamic element of policing, so there will be areas that only a few people understand fully and are aware of, but that is as you would expect.

Gary Pugh: Certainly, in my role in the Metropolitan Police, coming from my background as a forensic scientist and also as chair of the Strategy Board, there is a lot of investment in raising the levels of awareness of what forensic science can and cannot do. Also, there is a thirst for knowledge among investigators, who want to use the latest technology to solve crime. The Metropolitan Police has a crime academy. It runs seminars and invests an awful lot in training to a level that work. However, as to the recovery and interpretation of evidence, particularly in relation to adopting the case management process to which Roger referred, there is an investment that the Police Service can make to ensure that the whole system is more efficient and effective.

Stephen Metcalfe: I will come back to the accreditation point in a minute, if I may.

Q154 Chair: Let me be clear. Mr Pugh, I have just checked my notes, and you started your career as a chemist, not as a forensic scientist. You worked in the FSS where you were immersed in all of the cross-disciplinary work that turned you into a good forensic scientist. You couldn’t have got that in a small police laboratory, could you?
Gary Pugh: No.

Q155 Chair: Services like the FSS, whether they are in the public or the private sector, are things that the police forces themselves cannot seek to emulate. Gary Pugh: Certainly in terms of the scale, I don’t think the Police Service is seeking to emulate that.

Q156 Chair: I just want to be clear so that I know where we are coming from.
Chief Constable Sims: You would, Chair, probably have to segment what the provider does. There are pieces that we do emulate and those that we never ever would.

Q157 Chair: And you wouldn’t seek to.
Chief Constable Sims: No.

Gary Pugh: Clearly, with regard to some specialist scientific areas like toxicology or fibre analysis, those analytical testing services, and particularly the more sophisticated DNA profiling techniques, it would be wrong for the Police Service, in effect, to undertake that work. However, as to the recovery and interpretation of evidence, particularly in relation to adopting the case management process to which Roger referred, there is an investment that the Police Service can make to ensure that the whole system is more efficient and effective.

Q158 Pamela Nash: I would like to ask each of you this morning how successful you think the current forensic procurement strategy is.
Chief Constable Sims: How do you measure success? It has driven down costs. It has hugely and massively driven up quality, in terms of timeliness, standards and so on. Has it contributed to market instability? It probably has. That was the piece that we picked up and on which we generated the PWC work. One could throw back the question and say that this was not entered into as a choice. It was a requirement that we generated a framework. Were it not for ministerial intervention a couple of weeks ago, it would have been enshrined as an absolute legal requirement that the framework existed. We do not look upon it necessarily as a choice. We had to do it. There was a legal mandate on us to do it. It think, in doing it, we have improved quality, we have reduced costs and we have generated a better relationship with suppliers.

Gary Pugh: I would add to that. The framework has brought a degree of standardisation into the commercial transactions that take place between police forces and forensic science providers. Over time and since direct charging was introduced for forensic science services, that commercial relationship has matured. The framework, in the way that it specifies the work that needs to be done and the amounts paid for that, provides a consistent and national approach to doing that. The framework has many advantages in the way that it operates in that all police forces are working to the same standards and to the same product specifications.

Roger Coe-Salazar: At the risk of repeating what the two people to my left have already said, yes, there has been a reduction in cost as a consequence of this.
Standardisation has brought the benefit of quality. So you have a standard quality approach that is driving through, and that has placed us in a good position in relation to the new quality standards that the regulator is working towards as well at the moment. There is consistency as well in the production. The last point is efficiency. Efficiency is critical in terms of having a clear, consistent process where everybody knows what the required standards are and works to them. There is an industry that can sit behind inefficient processes and costs a terrific amount of money. So there has been that advantage.

Outside those, operationally from a prosecutor’s perspective, we have not noticed a difference in the sense of cases being taken to court and so forth, but I do know that all of the other things that I have just said are things that add to and aim to provide efficiency because we are not wasting money elsewhere.

Dr Bramble: I would like to add one additional point. One of the other objectives with the framework was to spread the work across a number of private sector suppliers. We now have four organisations that are able to offer what the majority of what the Police Service wants to procure, which adds additional competition. That is not to say that we are not continually looking for improvement. We recognise there are some frustrations, particularly with the length of time. Again, some of the timings in the many competitions are a legal requirement in terms of the 26-week tendering process and 15 weeks for the transfer of services. So these things are set in stone. Public buying is often a frustration to the private sector. We are feeding those lessons in, and part of the PWC report was to help us work out the next framework, because this framework comes to an end in 2012. We need to replace it. We want to take those lessons on board and try and find even better ways of procuring for both sides.

Q159 Pamela Nash: Thank you. I am not sure who the best person is to ask this question. I think it might be you, Dr Bramble. My understanding from what I have read is that most contracts have been awarded to providers usually for three years, which is a relatively short term. Do you think that this has had any impact on long-term investment from providers, particularly in research and development?

Dr Bramble: I am not fully aware of the legal requirements, but there are some difficulties in setting certain times on contracts. Perhaps Mr Pugh is better placed to answer specifically why the police may purchase on certain contract times. Of course, investment decisions to do with R&D are a different kettle of fish. There is always a danger of short-termism, but some areas of the business are, quite clearly, going to be around for some time. If they want to win contracts in the future, building in innovation for productivity and efficiency gain across certain sectors of their business is wise if the business wishes to continue, I would suggest. I cannot answer specifically why three years is better than five.

Gary Pugh: I might be able to assist. Forensic science covers a broad range of things nowadays and some of that has been referred to in previous evidence as “commodities”. Perhaps it is better described as “testing services”, which are relatively routine analytical functions. The routine processing, for example, of DNA samples taken in custody—PACE samples—would be an example of a bulk processing activity, as compared, if you like, with the other end of the scale. For example, you have very complex analysis in a murder investigation and possibly multiple evidence types involved. That type of case work is much more complex.

Certainly, the approach in the Metropolitan Police is that for those routine testing services where there are a number of providers—there are eight or nine in the framework—we are seeing significant unit cost reductions. The commercial sector is investing in automation. Therefore, the price is changing quite quickly. It is, therefore, better for us to go for a relatively short contract to take advantage of those price reductions.

On the more complex case work, we tend to have longer contracts because we are looking there for quite a different service and probably a different relationship with the providers who undertake the more complex work in homicide investigation and rape investigation, for example, in the Metropolitan Police.

Q160 Pamela Nash: I am aware that the framework agreement does not cover every Police Service in England. The north-west and south-west regions are not covered by the agreement. Does anyone know why?

Chief Constable Sims: I am sure others will probably help me, but what we refer to as the west coast, north-west and south-west, in effect, went to contract ahead of the national framework. In general terms, their arrangements are very similar to the framework, but they are not at the moment part of it. When they come to renewal, they will renew into the national framework and be fully part of it. If you like, it is an accident of timing that they went ahead of the development of the framework itself.

Q161 Pamela Nash: But it can be confirmed that they will eventually be part of the framework.

Chief Constable Sims: They will, yes. In general terms, their arrangements hugely resemble the framework because, in a sense, the framework was developed on the back of their experience.

Q162 Pamela Nash: Finally, Dr Bramble, I am aware that the NPFA will be closing in a year’s time. Who will be overseeing the framework agreement and also the National DNA Database when this happens?

Dr Bramble: It is my understanding that the Home Office has requested that non-IT procurement returns to the Home Office as soon as is feasible. I believe that work is under way. That would suggest that the procurement element of the national framework, in terms of the skills and capability, will sit in the Home Office. Alongside that are the people who have the service skills in terms of understanding forensics and what all of the services and products within the framework actually mean. They reside with me at the moment.
As for the broader piece, at the moment my understanding is that the NPIA will be phased out. At the general level, there are a number of reviews that we are waiting upon from Lord Wasserman and Peter Neyroud on leadership. These will help decision-making processes, which ultimately will decide where the functions that remain in the NPIA may end up. That is a process, according to my understanding, that is going to take most of this financial year, I suggest.

Chief Constable Sims: Chair, we don’t know. It is still very much up for discussion. Our understanding from ACPO’s point of view is that different parts of the NPIA will migrate to different homes. Some of it will, perhaps, go back to the Home Office, some of it, potentially, will be within the National Crime Agency that is being established, and some, potentially, within lead force arrangements within policing. As yet, the route map is not clear and it may be a slightly longer route map than you have described.

Q163 Stephen Mosley: Forensic Science Northern Ireland has said, and I quote: “The ACPO led procurement approach to date has been poorly conceived.” They also talk about the negative effect of commoditisation leading to fragmentation of casework. To what extent is fragmentation of casework across different providers happening currently and do you have any measures in place to stop this happening?

Chief Constable Sims: I disagree with virtually everything in that statement.

Gary Pugh: There is fragmentation in the sense that there are a number of different providers providing services to police forces. I have no experience of the fragmentation to which I think that refers in which individual cases are being fragmented so that different materials are sent to different providers. That is certainly not the case in the Metropolitan Police and I don’t know of any other force that operates forensic science in that way. I would disagree as well with that statement.

Chief Constable Sims: Chair, you could always have a highly specialised piece in a case that required it to go to a niche provider who was, in effect, the only provider. That has always been the case.

Q164 Stephen Mosley: It was some of the evidence that came in so I thought I would put it to you. Do the other two members have any comments on it?

Roger Coe-Salazar: Does it naturally follow that fragmentation is a bad thing? It is how it is managed. The proof is in the pudding here. We prosecute over 1 million cases a year. There is a distinction, as Gary has pointed out in particular, between specialisms as opposed to moving one particular article from one place to another, to another and to another. If, indeed, fragmentation is taking place, a risk is inherent in that and the risk is to do with continuity. But, if it is managed properly, then it is not a problem. It is like most things. On the face of it, operationally, from our perspective, if it is taking place, it is not creating an operational delivery problem.

Dr Brumble: I don’t have anything to add to that.

Q165 Stephen Mosley: The other issue I was going to ask about, which the FSNI also raised, is what happens in serious and complex cases. They mentioned national security. When we visited the FSS last week, they were quite proud of the work that they have done on terrorist incidents in the past and how responsive they had been to the needs of the police. What will happen to that work in future if the FSS closes?

Gary Pugh: I can take that question. The Metropolitan Police provide the national lead on counter-terrorism within policing. The nature of the current terrorist threat is not similar to the previous terrorist campaigns we have had in the UK, which have been indigenous, particularly the Irish troubles. There was a lot of reactive forensic work there with a number of incidents that required a considerable amount of forensic input. The current situation is, fortunately, that we are not in that position and so the requirements for, as I call it, “traditional forensic science” are relatively low.

I am concerned, and I have raised this matter within the Transition Board on the closure of the FSS, as to how we access capacity and capability in the event that there is an increase in demand. But, at the moment, even with recent events, particularly the July bombings, this has not led to a massive increase in the requirements for forensic science.

Q166 Stephen Mosley: You said you had raised it. Have you had a response?

Gary Pugh: Not yet. We are actively in discussion over how that would be managed. There is not a separate dedicated resource for counter-terrorism. There never has been. We would look to draw on the capacity and capability that is available across the country. I would be reasonably confident that we could do that.

Q167 Gavin Barwell: When you were answering a question from the Chairman at the start of your evidence, it related to the external market. The decline that we have seen was the result of two things. One was getting better value for money for spend, and, secondly, there has been a peak because of the DNA work. In which years would we have seen that peak in the DNA work?

Chief Constable Sims: I think it was 2004–2005.

Q168 Gavin Barwell: Until?

Gary Pugh: The DNA expansion programme lasted roughly between 1999, I think, and 2005. Coming off the back of that programme and the grant funding ceasing, with more providers entering the market, because, clearly, there was a large spend in that area, that has led to the various efficiency gains to which I have referred and unit cost reductions in DNA profiling. The routine processing of a DNA sample from a custody sample, as I referred to earlier, has gone down from around £50 to probably under £20 now.

Q169 Gavin Barwell: The NPIA provided us with some figures for internal and external spend in each financial year from 2005–06 to 2009–10. I am not sure
if all of you have those figures in front of you. Can any of you give us the figures for the current financial year or the estimates for the current financial year? If it helps you out, in 2009–10, the figures showed £185 million internal spend and £165 million external. You will have heard witnesses today and in our previous evidence session say that they believe that the external spend this year is down to £110 million. Are you in a position to give us figures on the internal and external figures for this year?

**Chief Constable Sims:** We are still collating that figure across the country. Every police force in the country is having to make some really difficult choices on spend. In my own force in the West Midlands, we have taken £40 million from our budget. There are very few areas of flexibility in a budget and forensic science is one. Part of that issue is about the spend decisions that we are making.

Q170 **Gavin Barwell:** So it doesn’t sound wrong to you that the external market could have gone down by that sort of level. You do not have the final figures.

**Chief Constable Sims:** Would I like to spend more money on policing? In general, yes.

Q171 **Gavin Barwell:** I am sorry, but that is not the question I asked. Other witnesses have said that the external market has gone down from about £170 million to about £110 million. I wanted to give you the opportunity to say whether that sounds about right to you. I understand that you don’t have the final figures.

**Chief Constable Sims:** I think that is probably at the lower end of what we would expect.

Q172 **Gavin Barwell:** What about the internal spend in the current financial year compared with previous years?

**Chief Constable Sims:** That is, obviously, going to be down as well.

Q173 **Gavin Barwell:** Previous witnesses have said to us that they think the decline in external spend in the current year is due both to the need to find savings and to an increased internal spend. You are telling us that that is not the case. It is just the need to find savings.

**Chief Constable Sims:** You are pushing towards this insourcing question. There are plans to do insourcing. It is very much around the margins and it is not going to have a huge influence on those figures until, of course, we get into the issue of the transition. Transition, to an extent, will depend upon a degree of insourcing to bridge the gap left in the market by the FSS.

Q174 **Gavin Barwell:** Given what you have said about the trend in terms of costs savings over the last four or five years, why has the internal spend increased over that period?

**Chief Constable Sims:** I can give examples of things that are now done internally. Take drugs analysis, for example. We used to do all of our drugs analysis through external providers. One of the big efficiencies, a thing called EDIT, allows us to do drug analysis within our own force area. It is the technological boundaries that are pushing the boundaries between internal and external. There has always been internal work. All fingerprint work is internal, circa 1900. A lot of the digital forensic work is internal because we have historically been the people with a lot of the expertise around that area.

Q175 **Gavin Barwell:** Do the figures from the NPPOA include money spent on developing in-house labs, infrastructure and skills, or are they primarily just the money spent on doing the analysis?

**Dr Bramble:** Are you referring to the fact that they include capital spend?

Q176 **Gavin Barwell:** Not just capital; capital, yes, but also training of staff.

**Dr Bramble:** They will undoubtedly involve training but they won’t involve any investment costs.

Q177 **Chair:** Where are those figures?

**Chief Constable Sims:** Where are the labs, first? There is lots of thinking going on about this but there are not vast numbers of internal laboratories.

Q178 **Gavin Barwell:** You just gave an example in terms of drugs work.

**Chief Constable Sims:** That is a piece of kit that you buy. It is disposable. It is a little bit like the old alcohol kit.

Q179 **Chair:** Can we be absolutely clear on this? When you look at your external spend column, that includes buying use of that laboratory space in wherever it might be. In your internal column, does that include buildings, overheads and administration, or is it just the analytical work? Can we have a straight answer to that, please?

**Chief Constable Sims:** Yes, of course you can. Yes, of course it does. It is the whole package.

Q180 **Chair:** That is the whole package.

**Chief Constable Sims:** Yes.

Q181 **Chair:** Including capital spend.

**Chief Constable Sims:** No, it won’t include capital spend.

Q182 **Chair:** Where is the capital spend, then?

**Chief Constable Sims:** There isn’t much capital spend.

Q183 **Gavin Barwell:** You are buying a kit, for example. I don’t know how much that costs.

**Chief Constable Sims:** That is not capital. The kit is a revenue spend.

Q184 **Gavin Barwell:** So that is not included.

**Chief Constable Sims:** Capital spend for us, as I am sure it is in most organisations, is producing new buildings.

Q185 **Chair:** So you have never refurbished a lab or built a lab in any of those financial years in any police force.
Chief Constable Sims: In any force, of course we have.

Q186 Chair: So there are more moneys to add to that column.
Chief Constable Sims: But it is going to be tiny. I take your point.

Q187 Chair: In that right-hand column we are talking about a spectrum that ranges from £350 million to £365 million. That is the total expenditure. There is, in overall terms, a very small range of £15 million.
Chief Constable Sims: Yes.

Q188 Chair: We are talking about tiny sums. I am interested in tiny sums because those tiny sums are police officers on the beat, in which our colleagues are all interested.
Chief Constable Sims: Not if they are capital spend.

Q189 Chair: It is money being spent by the Police Service. We want to know what it is.
Gary Pugh: If I might assist, in terms of the comparison, we are comparing the spend on forensic science services—those are the costs of the services—and they will be commercial costs. They may include an element of depreciation. The internal spends are the costs internally of providing internal services, which include laboratories. For example, most police forces have laboratories that develop fingerprints. There is, if you like, activity taking place in the Police Service that utilises laboratories. Some of those laboratories may sample, for example, for DNA profiling. There is always a capability within the Police Service to undertake that type of work.

To pick up on the drugs point, technology is allowing us to do things, as Chris described, like drug testing in custody, which is a far more efficient way of undertaking that drug testing than to send it to a laboratory. We deal with an individual there and then.

Chief Constable Sims: We possibly don’t need to bail that in custody, which is a far more efficient way of us to do things, as Chris described, like drug testing in custody, which is a far more efficient way of undertaking that drug testing than to send it to a laboratory.

Gary Pugh: Yes.

Q190 Chair: Where are we going to find out how much each police force has spent outside that left-hand column on forensic services?
Gary Pugh: You will certainly find the running costs of that. In terms of the capital investment, that would be difficult, because if you class chemical development—

Q191 Chair: If it is difficult, how do you know it is a small figure?
Gary Pugh: Because what we are separating is those things—for example, DNA sampling—from the chemical development of fingerprints and the processes that are undertaken in the Police Service. I think what my colleague is highlighting is that there is relatively little development of laboratories that undertake forensic science work within the Police Service.

Chief Constable Sims: You are shaking your head, Chair. I could find out, if it helps to give you a view, what the West Midlands Police capital expenditure on forensic science was over that period and supply that to the Committee. We are about 6% of national policing, if that would give the Committee a view. It would be a fairly small figure but I will find that for you and supply it.

Q192 Chair: That would be helpful. We will, perhaps, ask every other police force. I am just amazed that it is not included in the figures; that is all.
Chief Constable Sims: Of course, the supply of capital expenditure is not in their figures either. It is trying, I guess, to give you a like on like.

Q193 Chair: The figure we are trying to compare is the expenditure by the public purse and, in your paper, that is not described in its entirety. It is partial.

Q194 Gavin Barwell: To the extent that the external capital expenditure is relevant, they will charge you for that, won’t they? They have to pay for that, so the price you pay them reflects their own cost.
Chief Constable Sims: I think the graph was trying to give a comparison of activity.

Q195 Gavin Barwell: I have one final question, Chairman. To summarise where we have got to, without having the final figures, your instinct is that a decline from £170 million to roughly £110 million in the current year sounds about right.
Chief Constable Sims: Yes.

Q196 Gavin Barwell: That is due not to further insourcing but due to pressure on budgets. If that has happened in the current financial year when there haven’t been Government cuts—the Government cuts will really hit from the next financial year—that is your projection about where that £110 million external spend is going to go over the next three or four years, when, as you said, forces do face significant reductions in funding from the public purse?
Chief Constable Sims: I am looking for assistance. I think the £110 million is the projection for the next financial year.

Gavin Barwell: I am not in a position to confirm that.
Chief Constable Sims: I believe the £110 million is the spend on 2011–12. The reason why that figure was sought was to draw exactly your point, to try and get a feel for how forces would manage their budgets in the first and biggest year of budgetary cuts.

Q197 Gavin Barwell: We may probe that subsequently, because the impression I got from earlier witnesses was it was what they had seen in the current year. Parking that for a second, what do you see as the trend? This is a quote from Bill Griffiths: “In the previous year the external spend was about £170 million. That dropped in this current year, we think, to around £110 million.” Let us park that for a second. I will take what you said that you think £110 million is the figure for the next financial year. What do you see as the trend in that £110 million figure by the end of the spending review period? Where do you
think this market is going to go, given that you have several years of pressure on budgets.

Chief Constable Sims: That is the area that we are working on with PWC to help us provide forecasts. I don’t think it will continue on that trajectory. What you have witnessed there is a step change to equip forces to move into a new era.

Q198 Gavin Barwell: So you have front-loaded the cuts in forensic science into the next financial year.

Chief Constable Sims: The cuts have been front-loaded on to policing, so the reaction has needed to be to make early decisions.

Gary Pugh: If I might offer a perspective from the Metropolitan Police, I query the scale of that reduction in this financial year. The reason I do that is because the spend in the Metropolitan Police this year will be roughly the same as last year.

Q199 Gavin Barwell: The external spend.

Gary Pugh: Yes. Therefore, I would suggest that the other police forces in the country must have made some pretty significant cuts to hit that £110 million. Having said that, there clearly is a downward trajectory on the spend. As the budget holder in the Metropolitan Police of all the forensic science work, we are in a difficult financial climate. There are other priorities. I have to fight my corner to retain budget provision for forensic science in total, but I am expecting there to be significant cuts over the course of the CSR period.

Q200 Stephen Metcalfe: As I said, I wanted to come back to this issue of accreditation and try and understand how important it is. As I understand it, external providers have to be accredited.

Chief Constable Sims: Yes.

Q201 Stephen Metcalfe: But in-house police labs don’t. First, is that correct? Secondly, if so, why is that?

Chief Constable Sims: We are in a process of moving through accreditation. ACPO has agreed both the way that accreditation will take place and a programme to take it through in a way that is deliverable, not just from our perspective but also from the accreditors, because if, suddenly, 43 forces were to march forward and seek accreditation across everything at once, that would not be deliverable. We have agreed a programme with the regulator to take accreditation forward through policing functions.

Q202 Stephen Metcalfe: How long is that programme?

Chief Constable Sims: I look to Simon.

Dr Bramble: As to the programme, for 2015, we are looking for ISO 17025 accreditation on all the fingerprint chemical processing laboratories that Gary mentioned earlier. That is also a requirement in EU law.

Q203 Stephen Metcalfe: By 2015, all in-house forensic science services will be accredited.

Dr Bramble: That is their fingerprint processing laboratories. I understand that the agreement between the regulator and ACPO is that any insourced contestable work that currently is carried out by a forensic science supplier, if that were to be carried out internally, would have to be accredited to the same level. You couldn’t just move it in and not accredit it.

Q204 Stephen Metcalfe: So, by 2015, the accreditation for services conducted in-house will be the same as the accreditation for services conducted by outside suppliers.

Dr Bramble: In some cases they are already, yes.

Chief Constable Sims: Can I say equivalent service?

One of the debates is around the activities of crime scene investigators, which actually make up the bulk of internal spend. There is not an equivalent in the external sector of their work. That is still a debate with the regulator about how their work is managed.

Q205 Chair: Is anything built into the budgets, coming back to my earlier point, on capital spend to meet accreditation standards?

Chief Constable Sims: You can’t manage it through capital accreditation.

Q206 Stephen Metcalfe: It is a revenue cost.

Chief Constable Sims: It is a revenue cost.

Q207 Chair: For a laboratory to receive accreditation, in some cases it may require capital spend.

Chief Constable Sims: Fine.

Q208 Chair: Is anything built into the budgets to accommodate that?

Chief Constable Sims: I can’t speak for other forces. It is not into mine.

Gary Pugh: As you are probably aware, we have achieved scientific accreditation. There are a number of different accreditations. The scientific accreditation is the so-called ISO 17025 standard. It is an accepted principle that, where we undertake scientific work, we should comply with that standard and the Metropolitan Police has already achieved accreditation to that standard. I know that other forces are on track to do that. In order to achieve that accreditation, it is worth bearing in mind that you have to demonstrate effectively a track record. It is not something you get before you start to do the work. There is a natural process through which you go to achieve that accreditation.

Q209 Stephen Metcalfe: When will you have achieved complete accreditation?

Gary Pugh: We have it already. We have achieved it.

Q210 Stephen Metcalfe: Thank you. How many other labs or other services across the UK have achieved accreditation so far?

Dr Bramble: I would have to come back to the Committee on that. I do not have the data.

Chief Constable Sims: It is quite a fast moving piece. There is a lot going through.

Q211 Stephen Metcalfe: Mr Coe-Salazar, how important do you think accreditation is? Do you have
any concerns about the quality of forensic science conducted in-house as opposed to externally?

Roger Coe-Salazar: I will answer your last question first, if I may. No. We have a neutral view. I don’t mean that as a sitting-on-the-fence answer. We have, in many ways, no particular interest where that service provision comes from. We are interested in the end product and whether or not the quality is there. Therefore, turning to the first part of your question on accreditation, accreditation is important. We have to be careful not to say that accreditation is the total panacea and anything that has happened up until now, where people have been providing services not subject to accreditation, must, therefore, be something that is suspect. That is not the situation. There are a lot of validation measures that have to go on, especially in new and emerging sciences. But, in terms of a progression for the future, we think that the movement to having a level playing field of accreditation is a very positive thing.

We do not hold a register of experts or anything of that nature. But, if we get something through as a case, and we know that the product that has been provided has already achieved an industry standard benchmark in terms of how it has been delivered, handled and produced, that is a good starting point. Also, accreditation has now gained quite a lot of currency; it has become better known. No doubt in the future, I can imagine, as we move towards this 2015 date, that, increasingly, it may be the case that one of the questions that starts to arise in cross-examination by defence practitioners will be, “Are you accredited?” If the answer to that is no, it doesn’t necessarily follow, therefore, that their evidence is damaged or lacks credibility, but one can see the impact of that type of question. So pace is important here.

Q212 Stephen Metcalfe: As things stand at the moment, you don’t have any particular concerns about quality internally and externally, and no examples of where one or other has—

Roger Coe-Salazar: No. There is no issue as to whether we get a better service when it is in-house or so forth. Our two fundamental starting points are the quality and time limits.

Dr Bramble: We must be careful not to fall into the trap that accreditation inoculates you against quality failure. As we have seen in the past, that is quite obviously not true.

Q213 Stephen Mosley: On that last point, Mr Coe-Salazar, you talked about quality and timeliness. There is also a question of impartiality as well. You can imagine that the police, if they are looking at evidence, might not look so deeply at evidence that might prove someone innocent as they do to prove someone guilty. Similarly, I know that Sir Alec Jeffreys has said: “If police were to establish their own in-house DNA testing facilities, then this would give them the power of arrest and sampling, the ability to test, plus potentially free access to DNA databases.” There are some concerns from the evidence we have received about impartiality. Are you concerned about it at all?

Roger Coe-Salazar: I think you have to differentiate between impartiality or bias and the appearance of it. Certainly, for the criminal justice system, the appearance of impartiality is fundamental and very important. It does not naturally flow from that. We do have to bear in mind the X millions of cases over the years that have been prosecuted—I know there are high profile examples to the contrary—without root and branch issues around bias and impartiality. One could equally say, “If you had this”, and there are pros and cons to both arguments.

If it happens to be vested within the police, one could say that the investigator is also conducting analytical aspects on forensics. Equally, if you put it into the private sector, one could say, “May there be an appearance of bias because they are producing a result in line with the people that are paying them, and they are a commercial enterprise?” You can put different arguments into the mix.

It actually turns back to Mr Metcalfe’s question to a certain degree. I agree with Simon that it is not the panacea to everything, but accreditation does help considerably, because one of the fundamental parts of impartiality is that accreditation is a truly independent assessment. One of the four foundation points of that accreditation is to do with independence and being free of any undue influence. So it is very specific and UCAS are very experienced in looking at this.

Q214 Stephen Mosley: Before I let you go, it might be worthwhile saying that, when we were at the FSS, one of the big things that they talked about was that their customer was the jury, and that is who they regarded as their customer. The police probably have a slightly different view as to who their ultimate customer is.

Gary Pugh: Impartiality in demonstrating objectivity is very important. In the Police Service, I can point to a fingerprint examination which is a subjective, expert opinion, which has been undertaken in the Police Service, and certainly in the Metropolitan Police, for over 100 years and used in some of the most high profile trials. On the basis of fingerprint evidence alone, people have been convicted. The forensic community generally understands that objectivity and impartiality, whatever the force in the Police Service or in the forensic science organisations, is all. If they lose that credibility in the eyes of the court, then you undermine the whole of forensic science. The criminal procedure rules and the recent work by the Law Commission underpins that objectivity, and I accept, effectively, as the head of the profession in the Metropolitan Police, that our overriding duty is to the court.

Chief Constable Sims: Can I just react to that first sentence? That first sentence challenges the absolute ethos of policing. We are about gathering evidence. We are not about creating a conviction. There is always a debate about impartiality around science. Yet you could take the same principles right through every element of police work, from the work of the scene investigator, decisions on scene management, decisions on seizing CCTV coverage and interviewing suspects. The same argument applies to every single part of that process.
We serve the public. It is the values of the Police Service that protect that. It is the fact that we operate in an adversarial criminal justice system that tests openly in court the product that we have gathered through forensic or other means. Some of the impartiality debate seems to me to be generated by looking at other justice systems that are inquisitorial rather than adversarial. Clearly, in an inquisitorial justice system, impartiality is absolutely essential because the evidence isn’t going to be tested in the same way by a court. At times we slip into comparisons with other jurisdictions that don’t have our basic framework.

Q215 Stephen Mosley: I don’t disagree at all. It is just that this evidence has come forward and I wanted to make sure it was put on the table and confronted head on.

The last question is to you, Chief Constable Sims. Have you or has ACPO advised the Home Office to wind down the FSS?

Chief Constable Sims: I think I answered the Chair on that. We provided a report through PWC about the stability of the market. It was the Home Office then, quite rightly, that made the decision. We were asked about how we would manage the consequences. The answer I gave to that question was that we would work under the Home Office lead and do everything we could to make a transition that provided continuity of service.

Q216 Gavin Barwell: In terms of the impartiality of expert forensic witnesses, do you think there are concerns about witnesses that are employed by police or private companies on that issue?

Chief Constable Sims: This is more an issue about courts and how the courts take and receive expert evidence. I am probably going to bow to Roger on his expertise on that.

Roger Coe-Salazar: I am sorry, but I missed the very start of your question.

Q217 Gavin Barwell: Some concerns have been expressed about the impartiality of expert forensic witnesses that are employed either by the police or private companies. Is that something about which we should be concerned?

Roger Coe-Salazar: As a starting point, yes, of course you should be concerned about it. Whether or not there is a basis to be concerned is the main question. This issue touches on the conversation that we have just had about impartiality. I know that a very lengthy Law Commission report has just been published in relation to this matter, but all experts are there fundamentally not to give evidence on behalf of a particular party. They are there to give their independent objective evidence.

The reason that I state rather the obvious there is, because when one goes back a step and you get into the disclosure regime—we haven’t touched on disclosure this morning—disclosure is a fundamental and the most difficult part of anything leading up to getting to a trial, if that is where you end up. The reason why it is so difficult and important is because it is a way of making sure that you have a fair and level playing field. Nobody is keeping information back that should be revealed to the defence so that you don’t have injustice.

Part of that disclosure regime is a rigorous assessment by the prosecutor that is then supported once it gets into the courts system, because the court will case manage all the way leading up to trial. To a certain degree, it is inquisitorial in nature. The adversarial bit rather comes at the end, when you get to trial. You will get that really delving inquiry into documentation. If there is anything raising impartiality, whether it is provided from the police or by private companies, those individuals, police and private companies have to provide any material whatsoever to the prosecution that may undermine the case. Prosecutors have guidance booklets issued and there are standard procedures on how you deal with expert evidence. Fundamentally, you have that belt and braces in place before you even get near to the court. Then it is further inquired into if you get into trial.

There has been discussion in the past, and it is generally not that well understood, about commercial sensitivity. We can’t just provide information—I think it was mentioned this morning even—about the FSS not sharing information and so forth. I am not adopting that point. I am just repeating it. Commercial sensitivity and keeping something back is a red herring. It has no relevance whatsoever to the criminal justice system.

If someone said, “We are a forensic science provider. This is the information and we want to get disclosure around methodology, the statistical analysis and everything that sits behind that”, and the answer was, “We’ll give you this but we are not going to provide this because it is commercially sensitive”, we would not use that evidence then. The reason for that is that commercial sensitivity can be protected by the court. When we get it, we will provide it only if it is something that we are required to disclose under the disclosure regime. So it is not an automatic handing on. It is not pass the parcel.

Secondly, if it is handed on to the defence because we are required to as it may assist the defence or undermine the prosecution, that is given only for that particular purpose. If the material is commercially sensitive, the courts have powers to make orders to restrict any further distribution or usage of that material. The sanction is that it is a contempt of court. A proper safeguard exists to protect understandable commercial sensitivity. So you can build all that together and that driving focus.

I suppose the final point is that we must not forget that, because we are prosecutors, it does not mean that we are striving for convictions. What we are striving for is justice. We are equally interested in things that might undermine that. When you bring all of that together, then, probably, the answer to your question is that you are right to be concerned about it. I completely agree with you being concerned about it.

I would not share a high level of concern that in actual fact it is a reality, but we should not be complacent. We should always be alert to it.

Gary Pugh: As we have moved into the safeguards around impartiality, clearly, you will be talking to the
regulator. As we found in the Metropolitan Police, the adoption particularly of the ISO 17025 scientific accreditation involves an intrusive technical audit by individuals and specialists outside the Metropolitan Police, with a line directly to the forensic science regulator. In terms of some of the safeguards we might look for in the system, wherever the forensic science comes from, regulation is a means to do that.

Q218 Gavin Barwell: Thank you for your very thorough answer. I have one follow-up question to Mr Pugh. How does the Metropolitan Police Service demonstrate that forensic witnesses are impartial? What are the processes you go through to do that? 

Gary Pugh: I hope I have partly answered the question. The adoption of the ISO 17025 accreditation means that we must have documented procedures. They are subject to external audit and scrutiny. There are internal processes and audits which also check that we are doing what we should be doing in terms of scientific methodology. Within the organisation as well, I have a role as head of profession which overseas all forensic activity within the Metropolitan Police in respect of meeting the standards of the regulator. We recognise that issue and we have systems and processes to deal with it.

Q219 Pamela Nash: I put my first question to Mr Pugh. Are you able to give the Committee any indication of what will happen to the FSS’s archives? 

Gary Pugh: The archives are important and, clearly, they are large. They are a rich source of material for cold case reviews, which you have seen in other evidence. We have plans in hand, working with the NPIA and under the transition programme, to consider how we can make sure those archives are preserved. Most of the information contained in that archive comes from police investigations. Clearly, individual police forces will have an interest in making sure that material is retained. That is both the case files and the material that is retained, like microscope slides and so on. We are very much on the case in terms of considering that in the run-up to the closure of the FSS. Clearly, the archive is not going to disappear. At the moment it is in secure storage. We need to decide how we manage that in the longer term consequent on the closure of the FSS. We accept it is an important issue.

Chief Constable Sims: The solution, to an extent, depends upon the transition solution for different parts of the FSS. For example, if part of the FSS was taken over and run as a going concern by someone else, then the expectation from ACPO would be that part of that new contractual arrangement would be the maintenance of the existing archive.

Q220 Chair: But ACPO wouldn’t argue in favour of breaking up the archive.

Chief Constable Sims: No.

Q221 Chair: Let me put it the other way. It is a rich source, as Mr Pugh said.

Chief Constable Sims: It has absolutely got to be protected.

Q222 Chair: It is so rich because it is a single source.

Chief Constable Sims: Ultimately, it is the police forces that own the material. We have a huge interest in making sure that that ownership passes smoothly through transition and is still available.

Q223 Chair: As a single entity.

Chief Constable Sims: Yes. Well, it slightly depends on how the FSS transition goes.

Q224 Pamela Nash: Just on that point, Mr Coe-Salazar, would you have any concerns about the impact on the criminal justice system if the archive was to be fragmented?

Roger Coe-Salazar: To be honest with you, I don’t know enough detail about the archiving and, if it was fragmented, what the options and consequences of fragmentation would be. As opposed to it being with a single entity, I don’t think I am probably in the best position to answer that.

Dr Bramble: We are in due process, as was mentioned. The NPIA is supporting ACPO in terms of ensuring continuity of service. There is a strand around the archive. As part of that process, all options will be looked at and the risks and issues associated with each option will be scrutinised. Clearly, some high risk would be to do with separating all of that material and spreading it across the nation, which would probably make that option a highly unlikely outcome. At this stage, all things are on the table because there are a lot of undecided questions about the bigger picture. We keep our options open, but it is firmly on the radar and firmly understood. It is going to take some effort to make sure it is dealt with appropriately.

Roger Coe-Salazar: Could I just supplement that slightly? It is a consequence point again. One of the very first questions that comes up in a criminal case around any form of exhibit is continuity. Has continuity been established? Can it be maintained? Is there integrity? It is called the golden thread—an umbilical cord that is running through the case. Therefore, although I don’t have sufficient knowledge to answer your question directly, the consequence, be it fragmentation or single entity, is that that continuity and access must be maintained intact and properly secured. It is almost defining the answer by the output.

Q225 Pamela Nash: You mentioned cold case reviews and their future. When the Committee visited the FSS, they informed us that they often instigate cold case reviews as a result of new technology and information that they have available to them.

Chief Constable Sims: It is the police that instigate. Then the forensic provider would support it, but it is our material and, obviously, it is our case.

Q226 Pamela Nash: In that case, you would not have any concerns about the number of cold case reviews being reduced as a result of the FSS being closed.

Gary Pugh: Certainly, in the Metropolitan Police, and you may have had some of this detail, we have been very successful in cold case reviews, particularly in rape cases and some homicides. We are, to some extent, exhausting some of those cases now as we
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have moved back into the 1990s and the 1980s even to look at some of those cases. Probably, the potential for cold case review with current technology certainly is not as large as it was 10 years ago. We need to future proof materials so that, should technology take another leap forward, then we have that material, those few cells from which we could get a DNA profile, retained in a suitable way. Then, with the next generation of technology, we could apply that in the future. At the moment, I won’t say that we have exhausted it, but we have certainly undertaken, as you are probably aware, a substantial amount of cold case review. We need those mechanisms in the future.

Q227 Chair: Finally, if there was a transfer of materials between laboratories and, indeed, a fragmentation, would you expect there to be more legal challenges emerging about the quality of the forensic science? Put yourself into the defendant solicitor’s role. It would be an angle, wouldn’t it, that you would pursue very carefully?
Roger Coe-Salazar: I am thinking back, Chair, for example, when the Human Rights Act came into force. There was a rush of challenges around the Human Rights Act for the first year or two years, and then the dust somewhat settled when clarity was brought in. It would provide an avenue for further probing by the defence. There is a difference between a legal challenge and a successful legal challenge.
Chair: Indeed.
Roger Coe-Salazar: For how long that would take place and whether there would be an initial peak of legal challenges, I do not know. Legal challenges sometimes run in fashions.

Q228 Chair: It would be fair to say that both the Home Office and the Ministry of Justice ought to build that into their considerations as a possible impact.
Roger Coe-Salazar: I think that is a completely proportionate and reasonable approach.
Chair: Gentlemen, thank you very much for your time this morning. I am sorry that we have overrun more than usual. Thank you very much.
Wednesday 27 April 2011

Members present:
Andrew Miller (Chair)
Gavin Barwell
Stephen Metcalfe
David Morris
Stephen Mosley
Graham Stringer

Examination of Witnesses

Witnesses: Professor Bernard Silverman, Chief Scientific Adviser, Home Office, and Andrew Rennison, Forensic Science Regulator, gave evidence.

Q229 Chair: Good morning, gentlemen. Thank you for coming. For the record, I would be grateful if the two of you introduced yourselves.
Professor Silverman: I am Bernard Silverman. I am the Chief Scientific Adviser to the Home Office.
Andrew Rennison: My name is Andy Rennison. I am the Forensic Science Regulator.

Q230 Chair: Thank you very much. Perhaps both of you would briefly describe the nature of your relationship with the Home Office. How do you influence the processes within the Home Office and to what extent is that independent? That is the starting point.
Professor Silverman: I am the Chief Scientific Adviser. As you know, most Departments have a chief scientific adviser. We are appointed as civil servants. I am full time. It is my full-time job. We are appointed under the code of practice for scientific advisers. I am a member of the group chaired by Sir John Beddington, the Government Chief Scientific Adviser, and independence is written into my job description. I have a threefold role. First of all, I provide scientific advice to the Home Office, Ministers and officials on any scientific matter relevant to our work. Secondly, I head the Home Office science group, which is a group of about 400 people who work in every scientific discipline, including economics, statistics, physical sciences, social sciences and so on to advise on Home Office policy matters. Thirdly, I am a member of the group of scientific advisers across Government, which gives me an over-arching background to the work that I do. I take my independence extremely seriously and I am expected to be independent. That is the whole point of my job.
Andrew Rennison: I am a public appointee, appointed by the Home Secretary on three-year terms. I am now on my second term, which started in February of this year. I am not employed on civil service terms and conditions; I have my own terms and conditions agreed with the Home Secretary. Similarly, independence is in those terms and conditions. The public appointments process does give you that ability to remain independent, although I remain in touch with Ministers and keep Ministers briefed on what I am doing as a matter of courtesy. But I am left alone to do my work without interference from the Home Office.

Q231 Chair: That sets the scene. Turning, specifically, to the Forensic Science Service, when did both of you hear about the proposed closure? Were you consulted by the Home Office on the decision to wind it down?
Professor Silverman: I was told about the decision a couple of weeks in advance; I am not sure exactly how many. I think it was in late November, or possibly mid-November. But I was aware it was going to happen. We were not consulted, as such, in advance of the decision being made, but we were informed. When the decision was made, we had been tipped off in advance.
My understanding, at the time and now, is that the decision was taken on legal and commercial grounds and that it is not within the Chief Scientific Adviser’s remit to advise on those matters. Therefore, I did not see the process as unreasonable.
Andrew Rennison: I was aware a couple of weeks beforehand, but I was not consulted. I am being consulted now.

Q232 Chair: But the decision does have an impact on the quality of science undertaken on behalf of the Home Office. That has yet to feed through because we don’t exactly know the final shape of the service. You must have had some input into giving advice to the Government that, if they are following this commercial path, they ought to take care to protect the integrity of the science.
Professor Silverman: My particular remit here, as I see it, is to look at the scientific research and development underpinning forensic science. The delivery of forensic science itself is not part of my remit, but looking at the research and development side definitely is. I was asked—and was very pleased to be asked—by the Minister to conduct this review, which I am now doing, into research and development in forensic science generally, of which the FSS is just part of a landscape.
Of course, the review is being carried out within the landscape of the decision to run down the FSS. Therefore, given that the FSS is going to be closed in a managed way, how can we make sure we have the best possible research and development in this area? I might add that there are many issues which needed to be looked at and it is clear that the review is going to be worthwhile in matters which have nothing directly to do with the FSS at all.
Q233 Chair: May your review, potentially, put on hold any idea of a rigid timetable? Professor Silverman: No. The review is independent of the decision to close the FSS. What I am saying, given that the timetable to close down the FSS has been set and the process is in place, that is part of the landscape, just as part of the landscape is that there are such-and-such commercial providers, 40 or 50 universities that do research in this area and so on. There is a whole landscape of research and development and it is about finding ways in which that can operate in the best possible way.


Q235 Stephen Metcalfe: What prompted the review? What is the time—Professor Silverman: Do you mean: why is the review taking place now? Stephen Metcalfe: Yes. Professor Silverman: The review was commissioned by the Minister. I have been in my job for just over a year now and it was a convenient and appropriate time, I think, to conduct such a review. But the review is not directly connected with the wind-down of the FSS.

Q236 Stephen Metcalfe: Do you think the timing of the two is correct? Do you think that one should have come before the other? Professor Silverman: I can see where you are going. It is obvious that the review was prompted because of the attention drawn by the closure of the FSS. There is no doubt about that. If you had started a review before the closure was announced, it would have signalled that something was up. I don’t think you could do that. It is right that we should have a landscape within which we can now conduct a review. To conduct a review against a changing landscape would be difficult. For example, I wouldn’t have suggested starting the review before the decision was announced. Once I was told that the decision was going to be made, it made sense not to commission a review until after the decision had been made. Then we have a landscape within which we can see what is going on.

Q237 Stephen Metcalfe: Right. The review is being conducted against the background that it is assumed the FSS will close. Therefore: what are we going to do now to make sure that the bits they are currently undertaking don’t fall through the net? Professor Silverman: No. That would be looking at it in a very narrow way. We are looking at the entire landscape of research and development in this area, only some of which is carried out by the FSS—there are many other players in the forensic science research landscape—and saying, “Let’s take stock of the whole landscape and see how it can work better.”

Q238 Stephen Metcalfe: Is that review imminent? Professor Silverman: Yes. The date for evidence to be submitted has gone and we are in the middle of writing it. We hope that it will be completed in a few weeks.

Q239 Stephen Metcalfe: Are you yet able to share the main recommendations with us? Professor Silverman: Yes—or at least the emerging themes. The major themes, which are not yet finalised, are likely to be these. We should realise that there are essentially four or five different groups of players. If we look at academia, first of all, there are many people in universities who are doing research which, at least in their minds, is relevant to forensic science. In every applied science discipline there is a mixture of people who say, “I’m doing all this wonderful work and no one takes any notice of it”, and people who say, “I’m doing all this wonderful work. I have this fantastic partnership with such-and-such a company and we are developing it.” This happens in every single area of applied science, and forensic science is no exception. I believe there needs to be more of a concerted, joined-up feel to the forensic science research community. In an interdisciplinary area like this, it is inevitable that people tend to go off and do their own things. I believe that if the community got together and communicated better, or were encouraged to do that, it could punch harder and find commercial opportunities. Therefore, I will be encouraging greater co-ordination between researchers and I will be encouraging them to support their own scientific and professional societies and networks. There are issues around funding and there are perceptions that HEFCE and the research councils are not interested in forensic science. That, in my view, is not true, although the interest needs to be articulated more clearly. Therefore, I am likely to be making suggestions, for example, about ways in which the impact of forensic science can be measured more explicitly. Within the Research Excellence Framework for universities there will be, of course, as you all know, 20% on impact, and forensic science is an obvious area of potential impact. People working in the area need to be confident that that will be measured. If you read HEFCE’s guidelines, it will be measured but we can make sure it is explicit that this is done. That is another suggestion I will be making. Work in forensic science crosses all the research councils. Some people say that they get money and others say it is very difficult. Every scientist finds it difficult to get funding. I can’t compare whether it is more difficult in forensic science than in astrophysics but, again, I can suggest ways of encouraging the community to communicate better its needs and wants to research councils.

If we move to the forensic providers, again, if we get the fora right, we can encourage greater communication with researchers, we can investigate what the barriers might be to collaboration and we can look for greater communication of research priorities and findings. That is important. As to the criminal justice system and the police, if we get the environment right we can get better communication. We have had some helpful discussions with people in the criminal justice system
about their wants and needs. For example, it has been put to us that there need to be clear statements on the state of knowledge of scientific advances and techniques, as there are in patent law. I am thinking through ways of dealing with that.

To sum up—I am sorry to speak so long about this—the principle is that if we can find ways of joining up this environment well and of empowering people to communicate with one another, this will be very good for the subject as a whole. It will be good commercially and it will be good for academia. It will be a win-win situation that we should all be hoping for.

Q240 Stephen Metcalfe: When conducting the review were there any surprising outcomes? Did anything take you by surprise, either positively or negatively?

Professor Silverman: I was very impressed by the energy and breadth of research. I am interested that this is an area a lot of universities that do not have a very high profile in research can get into. That is not surprising because you can start working in this area quite easily. That is very good. I was also interested that, of course, all of the commercial providers that wrote to us have their own research programme. So it is not true at all that the only research being done is being done by the FSS.

Q241 Stephen Metcalfe: Who wrote or determined the terms of reference against which you conducted your investigation? Why did you not look at the overall size of the market?

Professor Silverman: It is a review of research and development, not a review of the market. I am sorry, that is a tautological question. You are saying: why is it a review of research, not a review of the market? The answer is that I would not see my remit as extending to the operation of the forensic science market. I don’t think that is a scientific question. That is why I would not necessarily have been comfortable had that been included.

Q242 Stephen Metcalfe: And the terms of reference?

Professor Silverman: Who wrote the terms of reference?

Stephen Metcalfe: Yes.

Professor Silverman: The terms of reference were set by James Brokenshire and I was consulted while they were being developed. I did not write the terms of reference but I was consulted. I was involved in the process of developing those terms of reference.

Andrew Rennison: Chair, with your permission, may I add a comment to that very quickly? A very important issue here for me is that of international research. I did some work in a different area about translational research. In fact, internationally, the UK is comparatively very good at this. It may be that the others aren’t even as good as we are.

Q243 Chair: And the FSS is held in high regard internationally.

Andrew Rennison: They are held in high regard, yes. But the Australians are doing a lot of research and a lot of research is going on across Europe. We need to link into that as well. This is not just a UK issue.

Q244 David Morris: Professor Silverman, whose responsibility is it to fund forensic science research and development? Could you distinguish the different stages of research and development from basic research to development and validation?

Professor Silverman: Yes. It’s an interesting question because, of course, you could also ask the question about any area of science. If I may, I will make comments about those. The responsibility to fund research in universities, which is where a lot of the basic research is done, falls in several directions. First of all, it is the responsibility of HEFCE, through what used to be called the QR—I am sorry. Are all these acronyms all right for you?

Chair: Yes.

Professor Silverman: It was the responsibility of HEFCE through the QR to fund all research in British universities and then, under the dual support system, also in the research councils. So both HEFCE and the research councils have that responsibility.

Commercial and industrial income in British universities has approximately doubled over the last decade, which is very impressive. That is an example of the way that all sorts of companies and organisations are funding British university research. If you take forensic science, the analogy would be that the responsibility is with commercial companies in the area of helping fund research, and they certainly do. There are lots of joint research projects there. That is where basic research is funded. It is a mixture. We used to have a dual support system but we have a triple support system because the private sector and industry play their part. That is something that has developed over many years, and particularly in the last decade.

In any area with a commercial market, bringing things to market will be the responsibility of the companies involved. The question of the role of Government in translating from basic research to applied research is one for every area of application. Forensic science is no different. If you look at the way it works in universities and in industry, it is problematic because it is always difficult to identify exactly which areas are interesting but are not going to be very promising and those which are going to find wide application. Experience in many areas shows that you can’t dictate it. What you do is create the best possible environment and then it should work out. There are many examples where it has. I did some work in a different area about translational research. In fact, internationally, the UK is comparatively very good at this. It may be that the others aren’t even as good as we are.

Q245 David Morris: I understand. What is the overall budget for research and development and how do you prioritise?

Professor Silverman: In forensic science?
David Morris: Yes.
Professor Silverman: I don’t think it is easy to quantify. If you ask different companies they will give you figures. You can get figures from different companies. There is no ring-fenced specific budget from public funds for research in forensic science. What will happen is that there will be projects which have funding from research councils and there will be academics who are funded by HEFCE. Sometimes it is quite difficult to identify exactly what is and is not forensic science, and there is no easy way of quantifying. It’s a good question. I am sorry I can’t provide the answer.

Q246 David Morris: No, it is fine. So there is no budget from the Home Office overall?
Professor Silverman: The Home Office does fund some forensic science work itself. It spends £280,000 on fingerprints, the OSCT spends about £500,000 on conventional explosives and work is being undertaken on nuclear forensics at Aldermaston. We also do work on roadside drugs, prototype drugs and so on. So there is work on drugs, explosives and legal highs. The total figure that I have is £2,338 million. Whether that is spent on forensics as you would understand it is a different thing.

Q247 Chair: Just to be clear, this is on the R&D side as distinct from the application?
Professor Silverman: Yes. This is work on forensics but it is on specific areas which the market is unlikely to deal with or where there are national security reasons for it to be done in-house.

Q248 David Morris: Do you think that forensic science is seen as a priority within Government? What evidence would you quantify to back that up if you do believe so?
Professor Silverman: The research councils do not, at present, see forensic science as a strategic priority. My understanding is that there are recommendations and suggestions I can make in my report which might encourage them to do so. It is not simply a matter of the research councils announcing that forensic science will be a strategic priority. It is a matter of the community. It is a matter of articulating. It is the users at the sharp end getting together and putting a case to the research councils for forensic science.

Q249 Chair: Mr Morris asked specifically about “within Government”. Research councils are a little bit arm’s length.
Professor Silverman: Yes. Within the Home Office— I can’t speak for Government more widely, but the research councils are one part of Government—we see forensic science as something where we should spend some research money on specific areas. More widely, I don’t think there is specific funding of forensic science research as such.

Q250 David Morris: Do you think the closure of the FSS will leave an R&D vacuum in the UK?
Professor Silverman: The short answer has to be no, but let me explain why. A lot of R&D is going on in many different places. In the sense that other companies, some of which have given you evidence already, are equally involved in R&D, every scientific company in every area does R&D. This is going slightly outside the scientific remit to answer that question. If you ask the question, “Is there R&D in forensic science other than in the Forensic Science Service?”, which is the question I would rather answer, the answer is definitely there is, yes. It is very interesting work.

Q251 David Morris: Do you think there should be a national ring-fenced R&D budget for forensic science? In your opinion, who should provide that funding?
Professor Silverman: Personally, I don’t think that national ring-fenced budgets are necessarily the way to go. I would much rather try and find ways of creating an environment where an area like this can naturally play its part and make use of existing funds. The minute you start with ring-fenced budgets, you have them all over the place. The point is that we need to find ways of funding science which are flexible and which can respond to excellence and opportunity. Ring-fencing budgets probably isn’t the way to do that. I’m not sure I am the person to ask, but that is my personal view.

Q252 Stephen Mosley: In the evidence that we have heard previously, one of the key concerns is the potential loss of forensic scientists with the closure of the FSS, either from the profession or from the UK. Do you share those concerns?
Professor Silverman: I don’t think I have enough information to comment. One of the issues is that in every scientific area there is always fluidity of a market—employees moving around. If we can create a good environment generally, that should help deal with that situation. I don’t specifically share those concerns but it would be sad if anything happened which meant that good work was no longer being done.

Q253 Stephen Mosley: How will you make sure that that doesn’t happen? How will you monitor the situation? How will you make sure that there aren’t any potential impacts on science?
Professor Silverman: I can’t make sure of those things. What is important to point out is that, to thrive, anyone operating in this market needs to have active research and development. Once that is pointed out, whoever is working in the area will make sure, I hope, that they support science in their area. Otherwise they are not going to succeed.

Q254 Stephen Mosley: You say, “I hope”. How will you make sure that that happens? How will you measure it?
Professor Silverman: Measuring it is difficult. If you ask a company how much R&D they are doing, they will give you a sum of money. So one way of measuring it would be to monitor the research and development spend from within industry. As I have said already, monitoring within other parts of the landscape is more difficult to do.
Q255 Stephen Mosley: Mr. Rennison, what impact could the loss of skilled forensic scientists have on the quality of standards and on the criminal justice system?
Andrew Rennison: That is difficult to assess at the moment. My understanding of the picture is that we have a considerable number of very experienced scientists at the top level. There is quite a strongly held view out there, and it is a view I share, that there are probably too many of those because there was a recruitment freeze in the FSS for about 10 years. So we have built up a good deal of very experienced scientists. There was a bit of a gap behind them, but there are a lot more very experienced middle-service scientists coming up through the system now.

What is worrying me is where all these very experienced scientists will go. I have been speaking to the other commercial providers about this and there are mixed views. Some say that, to date, they have had no problems with recruiting those most experienced people—because they do need them—as mentors for the abundant number of more junior scientists that are left who do the majority of the desk or bench work. To date they have not had a problem with recruiting those most experienced scientists, but there is a concern, in the current climate, whether those people will stay or go. That is something I will have to monitor.

The flip side of that is the view that there are too many people at that level already. The commercial companies—you had Mr Richardson and David Hartshorne here, and I have certainly spoken to David and others about it—can operate very adequately with fewer numbers of those very experienced scientists because there are probably too many at the moment. But that has to be tested. The way to monitor that is through their accreditation and the quality standard frameworks they have.

Historically in the UK, we have tended to look at the assessment of individual competence of scientists as the measure of quality. That has missed two very important components. A very important component for me is the assessment of organisational competence. Is an organisation delivering forensic science in a forensic service, the laboratories, or any aspect of forensic science—competent to deliver that science and those forensic services? Part of that competence assessment through the UK Accreditation Service, which I am pushing for, is an assessment of your ability to have the right people with the right competence delivering the right work.

I have recommended to the Home Office and the NPIA that they now need to be speaking to the United Kingdom Accreditation Service so that as work moves from the Forensic Science Service, possibly, to other providers, the UKAS is invited in at a very early stage to make sure that those providers are able to manage the increases in volumes and have the staff and competence to do it. Their accreditation says that they have to so we monitor it through the accreditation framework.

Q256 Stephen Mosley: You are talking about people currently in the profession at the top of their careers. What about future people? We have had different angles from the evidence we have heard. When we talked to people from the private providers, they were saying they are looking at good scientists coming in.
Andrew Rennison: Yes.

Q257 Stephen Mosley: Do you think that changes to the FSS might put those scientists off going into the forensic sector?
Andrew Rennison: No, I don’t think so. There are plenty of other companies employing and recruiting forensic scientists. The interesting irony here is that an abundant number of people are coming through universities now either doing specific science courses or very specific forensic science courses. There is no shortage of people to recruit from and train up, and I don’t think there will be in the future. That is only the first stage in the process. You have then got to bring people into the organisation and train them as real forensic scientists. I don’t think it will cause problems. There is an abundant pool of very well educated people out there who are interested in the profession.

Q258 Stephen Mosley: Moving into a slightly different direction, you will remember we heard from Professor Jim Fraser.
Andrew Rennison: Yes.

Q259 Stephen Mosley: He said that there were too many people doing a lot of these forensic courses because what the companies actually want are people with good basic science skills who they can train in forensic. Yet, if we look at the figures, there are about 5,500 people currently studying forensics at university. Often these courses have been put on by the universities because they are popular and fashionable at the moment. Do you consider that there are too many people doing forensics as a subject rather than doing proper science subjects?
Andrew Rennison: I do speak to vice-chancellors and professors of forensics about this sort of thing quite often. If you struggle to fill your chemistry degree course nowadays, put the word “forensic” in front of it and you get tenfold applications. Forensics is very fashionable and it brings people in. I have heard one very experienced professor in this field saying, “What we are doing is immoral. We are offering people degrees and training with no real prospects of jobs at the end of it.” However, it is putting people through good science training, and we do need more scientists. Many of the people who finish their forensics degrees go off and work in other industries. It is a mixed picture. We have to be very guarded that we are not making false promises to potential graduates that cannot be met but—and Bernard and I have discussed this—it is a good thing to have more science graduates. The country needs them.

Q260 Gavin Barwell: You acknowledged, in response to an earlier question, that the FSS is held in very high regard internationally?
Andrew Rennison: Yes.

Q261 Gavin Barwell: Will the closure affect the UK’s standing internationally in terms of forensic research?
Andrew Rennison: I deliberately made the comment earlier about the international picture with regard to research because we are at risk of wasting time, effort and money if we don’t collaborate on research. I collaborate very closely with my Australian counterpart. I am now collaborating with contacts in the US. We collaborate with the European Network of Forensic Science Institutes. We are drawing up a joint strategy with them because they are researching exactly the same issues we are researching. A good example of that is cognitive bias or cognitive effects in forensic science. At the moment there is research in America and across Europe and we want research done here. We need to collaborate on that and to draw that together.

The people I am meeting clearly hold the Forensic Science Service in high regard. Equally, they hold universities and other places around the world in high regard. The Forensic Science Service is not the sole source of good research, but they are held in high regard because they have been here. They have led on a lot of research over the years and done some very good work. My view is that they don’t leave a vacuum behind them. There are plenty of other people doing very good research around the world that is equally looked at and held in equally high regard.

Q262 Gavin Barwell: I want to pick up on that. You said that there are plenty of people around the world doing good research, not just in the UK.

Andrew Rennison: And in the UK, yes.

Q263 Gavin Barwell: I take your point about collaboration. That is true across many different scientific disciplines. Just to come back to my original question, do you think the UK’s standing internationally in forensic research will be affected by the decision to close the FSS?

Andrew Rennison: I think it will be dented. The simple fact is that if you close the FSS, which has represented the UK on the international stage, of course it will be dented. But there are plenty of other companies. LGC Forensics do a considerable amount of very good research. We have been to see it.

Professor Silverman: Yes.

Andrew Rennison: Orchid Cellmark does a considerable amount of good research. We are aware of some that is going on. All the other companies do. They are also on the international stage.

Q264 Gavin Barwell: This is a slightly different question. I am looking now at international comparators. Did the review consider models of forensic science and regulation of quality standards in other countries?

Professor Silverman: You say “did”. We haven’t finished the review yet. Quality standards are not, themselves, part of the review. We are concentrating mainly on research and development and its relation to international networking. That research happens on the international stage. In fact, we have had a submission from a university outside the country and so on. So we have heard from people there. But it is fair to say that we are not looking at mechanisms in other countries specifically.

Andrew Rennison: I can probably help you with that one. I look at models of regulation around the world and I compare the UK position very carefully with others across Europe. In terms of regulation and standards, the Australians probably lead the world at the moment. The UK is catching up fast. The United States is way behind us in terms of regulation and standards. It is a very mixed picture.

In terms of the models of supply of forensics, there is a multitude of different models out there, from the old traditional government forensic laboratory, to commercial laboratories and to police laboratories. They all have strengths and weaknesses. The trick for us nowadays is to take a long hard look at how modern forensic science works and how we should be providing it.

I recommend you read a very good book called The Handbook of Forensic Science written by Professors Jim Fraser and Robin Williams, which was published last year or the year before last. That provides a very objective and up-to-date analysis of the forensic markets and the use of forensic science nowadays. Chair, you are welcome to borrow my copy, if you want, because I think it is a very good read. In their book they talk about the shift of forensic science out of the traditional laboratory and much more to the coalface of policing. This is my experience as well. This is driven very much in the UK. I think the UK leads on this.

Q265 Chair: I am curious about your earlier answer, particularly about the United States. Isn’t it the case that the United States, who you described as “behind”, are starting to emulate the service that we are about to close down?

Andrew Rennison: Laboratories across the United States tend to be owned by the investigating agencies. They have been through a thorough review of their forensic services through the publication of the National Academy’s report in 2009. The result of that is emerging legislation in the States which subscribes to the traditional laboratory model, but actually will be legislating for a standards framework very similar to the one that I want in the UK.

Q266 Gavin Barwell: Just picking up that point, it is the case, however, isn’t it, that the US is setting up the National Institute of Forensic Science? They are, essentially, moving to a model of the state-funded, pre-commercialised FSS alongside some of the other provision that they have.

Andrew Rennison: Yes. The Leahy Bill in the United States is in Congress. I was talking to the National Institute of Justice a couple of weeks ago about that. That is going to take about three years to work its way through and the funding for that is far from guaranteed, so there is a long road to travel yet. The Bill before Congress recommends this National Institute of Forensic Science with funding for research and to set standards. It doesn’t provide funding for the laboratories themselves but it provides funding for research and it provides funding to set up the standards frameworks that are needed. It also legislates for the type of accreditation framework that I want. It makes no comment about forensic science
at the coalface, which is where we are very much in the UK. It is difficult to compare at the moment because there is a much more traditional model in the States that does not necessarily apply here.

Q267 Graham Stringer: When we had the FSS here they told us, if I can just follow up on Gavin’s questions, that, along with the FBI and Lausanne, they were considered the best in the world. The Dutch, the Germans and maybe some of the eastern Europeans are catching up. Were they selling us a story or is that accurate?

Andrew Rennison: It is accurate to a degree. They have been world players but the picture has changed in the last five years or so where the research has moved more to applied. It is a different kind of research. It is based on producing new products that will help the company benefit in the future. They have slipped from the pure research that they have been doing in the past to much more of an applied type of research.

I disagree with the notion that they are one of a tripartite of leaders in research across the world. There are many others involved. Bernard has seen some of that in his review. We have to respect what the FSS has done historically, but new people are emerging and new companies are investing in research. A good example is LGC Forensics, which are able to bring in a much broader bedrock of research, because they are a company with specialisms not just in forensic sciences but other sciences that are contributing to the forensic science research. We have been to their labs and seen it. They are a multinational company.

Q268 Graham Stringer: Can you give us examples because I am still left with a contradiction in the evidence? Where have LGC Forensics broken through? Where have they given a better service? Where have they solved more crimes? Where have they developed their research compared to the FSS?

Andrew Rennison: They have developed their own DNA methods which have helped solve crimes where, in the past, the FSS were not able to develop DNA profiles. They are producing a unique piece of equipment which will massively help the investigation at crime scenes in terms of DNA analysis and technology. That is now being assessed by the National Policing Improvement Agency as part of the Rapid DNA project. They undertake a considerable amount of chemistry research, which was demonstrated to us when we visited the labs.

Q269 Graham Stringer: Can I just pursue this a bit with Professor Silverman? You emphasised, at the start, that you were independent. I am pleased about that. But, having said you were independent, you said, “The Government have taken the decision that the FSS is to close so we are not looking at that research.” That doesn’t strike me as the response of an independent scientist. You have got this and, whether it is declining or whether it is increasing, it has certainly had a history of excellent science. Yet you decide, because the Government says it, “I am an independent scientist but I won’t look at that and the contribution it can make.” That strikes me as wrong.

Professor Silverman: Thank you for asking the question. I did not mean that I wouldn’t look at the FSS’s research; of course I’ll look at the FSS’s research and at all the other work that is going on. The question is about the parameters within which I am able to operate. I take it that my review and my terms of reference are to look at the research and development in the light of any decisions that have been taken. The decision for a managed closure of the FSS has been taken and I don’t think it is within my remit to challenge that particular decision.

We want to say, “This is the landscape. Now we are going to make sure that we look at the way that research and development should work given the landscape that exists.” My understanding is that the decision about the FSS has to be taken for legal and commercial reasons, which I am sure have been explained and will be later, and that that is a done deal, essentially. That was not a scientific question. The important thing is to look at the research landscape, including work that has been done in the FSS, and see the way that that should develop best in the future.

Q270 Graham Stringer: But we have been told that the structure of organisations matters in terms of the research that is done. It is not just a chemist or a scientist at the laboratory bench pouring sulphuric acid into a test tube. It is the whole structure of the organisation.

Professor Silverman: It is the whole structure. That is absolutely right.

Q271 Graham Stringer: We have this organisation with a history. Yet, because the Government have taken a decision, you say, “I won’t look at that.” I am afraid I see that as being both in contradiction to your claim that you are independent and to the fact that this does not affect the science. The evidence you are giving is contradictory.

Professor Silverman: What can I say? I have a clear view of the framework within which I am working. Maybe I haven’t expressed it. If I were to recommend that we should spend a billion pounds on research in an area, nothing would happen. It wouldn’t have any effect. The situation is that it has been decided that the FSS is going to run down. It is important that whatever the succession, however things move on from here, research and development should be given the best part in that future. There are many different mechanisms that work within markets where science is a part. The main thing is to make sure that forensic science gets the best shot in this. With respect, I don’t think my evidence is contradictory; I apologise if it has come over in that way.

Q272 Graham Stringer: I will leave it at that.

Mr Rennison, I want to mention ISO 17025. There is only one police laboratory—the Met—operating to that standard. Why are the other police laboratories not operating to that standard?

Andrew Rennison: Greater Manchester police now have a laboratory working to that standard for the examination of firearms. West Midlands police have a laboratory to that standard for the examination of
firearms. Derbyshire police have a laboratory accredited for evidence recovery. I know of three other police forces going through the application process at the moment. The current situation in policing is that many police forces are actively looking at collaboration agreements in the provision of forensic science, which I think is exactly the right way forward. I am now very closely engaged with those collaboration projects where I can be. For example, I sit on the project board of East Midlands police. They actively want to pursue application for ISO 17025 for their combined laboratories. The same in the north-west is led by GMP in Cheshire—Cheshire have applied for accreditation for their laboratory—and the same in the Yorkshire forces as well, where they are combining.

Q273 Graham Stringer: I am wrong, then, if it is more than the Met. But the situation has still been allowed to develop where a lot of police laboratories are not operating to this level of the ISO 17025 standard. Why has that been allowed to develop?

Andrew Rennison: It does take time to achieve the standard. I have made it very clear to these police laboratories that that is the standard they should be working to.

Q274 Graham Stringer: What is the timetable for that? What is the schedule? When will they all be accredited?

Andrew Rennison: 42 police forces have fingerprint enhancement laboratories. That is traditional fingerprint development work that the police have always done. The European Framework decision says that they have until November 2015 to achieve accreditation for those. That is work that was very rarely done by the commercial laboratories. That was traditionally done in-house by the police. There is now a project, led by Deputy Chief Constable John Fletcher at Bedfordshire police on behalf of ACPO and the National Policing Improvement Agency, to get all those laboratories into accreditation. They have provided all the training and everything else and they are providing the toolkits to do that. The Framework decision that I have quoted also requires that if your laboratory is undertaking any DNA technology, that has to be accredited by UKAS—the United Kingdom Accreditation Service—for evidence. The numbers in terms of police laboratories that that is the standard they should be working to.

Q276 Chair: The physical standards of the laboratory, then?

Andrew Rennison: Absolutely. Let me explain what 17025 achieves, because it is a standard and one that is adopted around the world. 17025 assesses a whole range of things, but these are the four cornerstones that are vital for me. First, it assesses the organisational competence: “As an organisation, from the top level, do you take quality seriously? Does that filter down through? Do you build a good quality culture?” That is absolutely vital. We have missed a key point in the past by focusing on the individual scientist because a good scientist could work in a poor quality environment producing poor science. Secondly, it assesses the competence of the individuals. It has been slightly weak in that area so we are bolstering that through the implementation of the Integrated Competency Framework developed by Skills for Justice, and the police and the commercial labs have bought into that.

Thirdly, it assesses, importantly, the validity of methods. It sets requirements around validity so when any numbers. We were a bit surprised that they couldn’t produce any numbers.

Q277 Chair: The reason why I asked that question—I am sorry to interrupt you, Graham—was that we got a rather woolly answer from ACPO when we were pressing them about capital expenditure. For example, if you said that this room was not suitable to be used as a laboratory because its air extraction system was inadequate, and there are capital implications, one would have thought that the police would have known the numbers involved in that kind of transformation. We were a bit surprised that they couldn’t produce any numbers.

Andrew Rennison: The numbers in terms of police capital investment in laboratories?

Chair: Yes.

Andrew Rennison: I don’t know the answer to that. I do know where some laboratories are being built at the moment. The West Yorkshire forces have one, Thames Valley has one and the South Wales forces have one. There are a number of them around the country. My concern, Chair, is that those laboratories are up to the right standard.

Q278 Chair: You have no idea what the capital implications are?

Andrew Rennison: No, but I think that aligns with the need for robust business cases for those laboratories to be opened. There should be a central and thorough assessment of those business cases to make sure—
Q279 Chair: There could be an argument that that money might be better spent on policing, and putting some of the testing out to commercial contracts.

Andrew Rennison: It sits very closely alongside the debate about what modern forensics looks like. In modern forensics there has been a massive strategic shift since the late 1990s and early 2000s where, with the DNA investment programme, with the investment in AFIS—the Automated Fingerprint Identification System—and methods now, for example, of delivering finger marks into a laboratory and getting an ident within a day, we have removed the old-fashioned process which wrote all sorts of time delays into forensic science. Police forces now expect those decisions to be driving their investigations within hours or days.

Forensic science is a 24-hour business in this day and age. Gary Pugh, who gave evidence, has 40% of his staff on shift work to deal with the forensic science issues quickly and promptly. That has moved a lot of the work away from the laboratories. Better training, influenced by Her Majesty’s Inspectorate of Constabulary and influenced by the Police Standards Unit in the Home Office, has driven up the quality of forensics at the coalface where you can have far more impact with what we call “forensic intelligence.” Forensics breaks down into the forensics that drives the investigation, which has got to be rapid, as opposed to forensics that supports the prosecution end value. I can quote you examples where that rapid technology can massively help inquiries. I am not sure we have the time to go into many examples, but there are many of them. That is driving the forensics much closer to the coalface where, perhaps, you do need laboratories and decision makers. You can’t be several days away, remotely, in a laboratory somewhere. You want the scientists there. More and more the police have those scientists driving the decision making, not necessarily with laboratories but certainly specialist advisers and heads of scientific support in police services, and helping really to squeeze the benefits out of fast forensic science, which is what we have.

There is a new model emerging where you will have more laboratories close to the coalface and I think it is well worth exploring whether those laboratories should be run by the commercial providers. I can see a real benefit in that in the future. So move the facility—still outsource it—where you can bring in all that expertise and support, but you can drive fast forensics.

Q280 Graham Stringer: That was genuinely very informative and useful information. However, can I take you back to the original point? When are all these laboratories going to be accredited? Are they all going to be accredited by the two deadlines that you told us about?

Andrew Rennison: There will be a whole range of activity, many of it before those deadlines. What I will be agreeing with individual police forces and these collaborations are action plans that I am comfortable with. I will agree individual deadlines with them. The absolute deadlines at the moment are November 2013 and November 2015.

Q281 Graham Stringer: Do you expect those deadlines to be hit by all laboratories?

Andrew Rennison: Yes, or they have to stop doing the work. It is as simple as that. We are going to do some risk assessments in the very near future about whether some of them should stop now.

Q282 Graham Stringer: That, again, is very good. Finally on independence, you said that one of the four legs of ISO 17025 was independence. In a world where the Crown Prosecution Service was set up following the fiddling of evidence by the police in the Birmingham Six case and others, shouldn’t these laboratories be completely independent of the police on principle?

Andrew Rennison: I don’t think that is necessary. A very good review is the recent Law Commission review around the admissibility of expert evidence, which was published two months ago. They have a very interesting section devoted to this issue of impartiality of expert witnesses—not specifically police experts, but experts across the piece, and in one paragraph they actually quote the police. They point out, quite rightly, that there are very few reported cases where impartiality has been an issue. They are recommending changes to the law built on an assumption that experts, and they include police experts in this, are impartial and understand their responsibilities to the court, which are very clearly set out now in the Criminal Procedure Rules. The evidence to date is that impartiality is not a massive problem in the criminal justice system, but I want to underpin that through accreditation.

Q283 Graham Stringer: With respect, people would have said that about police evidence before the Birmingham Six, wouldn’t they?

Andrew Rennison: But the Police and Criminal Evidence Act and many other things have changed since then. We do have a prosecution service—

Q284 Graham Stringer: The question I am asking is: isn’t this, if not a practical problem, the same philosophical problem—that they are not independent?

Andrew Rennison: I think that is a very interesting philosophical issue and you could end up discussing the whole philosophy of policing. The police are charged with investigating crime. That is how our system works. It is an accusatorial system. With modern forensics right at the coalface, they are always going to have a heavy influence on that. In my view, we need to do everything we can to make sure that that is independent and objective and withstands the scrutiny of the prosecution and the court process.

Q285 Stephen Metcalfe: On a point of clarification, the two deadlines you mentioned, 2013 and 2015, were for specific services, weren’t they?

Andrew Rennison: Yes.

Q286 Stephen Metcalfe: When do you see all forensic science conducted in the UK being conducted by accredited labs?
Andrew Rennison: You have to split forensic science into the crime scene standards and the laboratory forensic standards. Those deadlines will cover the vast majority of laboratory forensics because, once you have your evidence recovery labs accredited, it is just a natural extension to include everything. It becomes the obvious thing to do and people do that across the board.

The big debate for me now is the crime scene standards. We are doing some pilot testing later this year. A new standard, ISO 17020, is being promoted—certainly across Europe, and I had some good discussions in America about this a few weeks ago—as the standard for crime scene investigations. It is all theoretical. It has never been used in practice. We will be the first to pilot that. I have three forces line up at the moment. For example, I have the freedom to say, “I’m not, at the moment, regulating forensic medicine, but I will do in a year or two’s time when I have the resources.” We are now doing some very constrained by the legislation. The recommendation at the time was to go for light-touch regulation but with the regulator having the freedom to move into areas that he or she saw fit. I enjoy that regulation but with the regulator having the freedom to move into areas that he or she saw fit. I enjoy that freedom to say, “I’m not, at the moment, regulating forensic medicine, but I will do in a year or two’s time when I have the resources.” We are now doing some brand new work with coroners to think about regulating non-forensic post mortems because that can feed into the criminal justice system. It gives us that ability to flex where we need to.

However, I am now reaching the conclusion that we have to seriously consider some sort of statutory underpinning of my role and some powers to mandate standards. Now that we have developed and consulted widely on the standards, it is entirely appropriate to consider whether we should be mandating those—holding the European regulations and translating that into domestic law with some sort of domestic powers to mandate standards—which picks up on your point very neatly, Mr Metcalfe. I do some work in the CCTV regulatory field at the moment—I am working closely with the Home Office on this—and the model they are developing for the regulation of CCTV in the Protection of Freedoms Bill is giving some very good pointers, I think, to the model I should work to. You appoint a regulator, so there is a statutory underpinning of the role, you ask the regulator to produce codes of practice and conduct that, if required, can be agreed by Parliament and are then published by the Secretary of State—you go through that consultation process—and you list in there the people who have to have regard to those standards. You don’t need to take it any further than that. That is now an active discussion.

Q288 David Morris: In your written submission you stated that statutory compliance had not been necessary to date.

Andrew Rennison: Yes.

Q289 David Morris: But FSAC minutes show that you are considering legislation to strengthen your role. Did the impending closure of the FSS prompt this change?

Andrew Rennison: I wrote that submission after the announcement of the closure, and at that time—this is how fast things are moving at the moment—I was quite content with not having statutory powers. I have changed my mind since then because, as I engage more and more with some police forces and others, I am beginning to realise the need to have more muscle behind me to enforce some of this. I have to confess that I have changed my mind slightly since I gave you that written submission.

Q290 Stephen Metcalfe: Obviously, we all agree that accreditation is important and plays a vital part in this. How confident are you that all the current FSS workload will be transferred to fully accredited providers by the closure deadline of 2012?

Andrew Rennison: The most obvious risk to me in the closure of the FSS is the risk of taking work out of the FSS accredited environment. There is no doubt that the Forensic Science Service, since 1991, has led the world on the development of quality standards. They now have, by far, the broadest “scope of accreditation”, which is the number of methods they cover in their accreditation. There is a real risk of taking work out of that broad scope of accreditation into a non-accredited environment. The way I describe that risk is that, in the accredited environment, you manage the risk of quality failures. You don’t eliminate it. You manage it down to low risk. You can’t inoculate against failures but you can manage the risk very aggressively.

If we take it out of that accredited environment to a non-accredited environment, the risk of something going wrong, I think, rises to very high. In the current environment you have a low risk but the impact is always high. You can never manage that impact down. The impact of a quality failure will always remain high. If you then take that work into a non-accredited environment, the risk shoots to high but the impact becomes very high because you haven’t got a leg to stand on, quite simply. I have written to ACPO, the NPIA and to the Home Office making that risk very clear. The result of that is agreements that the work will be moved to similarly accredited environments.

Q291 Stephen Metcalfe: Right. So there is an agreement?

Andrew Rennison: Yes. We have now got to work through the real detail of that, and I am going to be in at the heart of it. Some tricky decisions might have to
be made. For example, if we move a piece of work out of the FSS into another laboratory which has a broad scope of accreditation, it might not have that specific method within its scope of accreditation. I need to look at the detail, but that is possibly a manageable risk, providing I see an action plan to get their scope extended to include that piece of work. That is a manageable risk compared to taking it to a non-accredited environment. So there is a bit of flexibility.

Q292 Stephen Metcalfe: I can see the distinction. You are confident, therefore, that there will not be a contamination or a degradation of the evidence as it is transferred out from the FSS into other providers? This is the integrity issue.

Andrew Rennison: If my views are adopted, then we prevent that.

Q293 Stephen Metcalfe: Good. That is great. What about the fragmentation of casework? How will the courts have faith that the exhibits have not been contaminated or tampered with?

Andrew Rennison: For me, fragmentation has been an issue long before the FSS and the announcement of the closure of the FSS. Complex inquiries nowadays involve far more than just the traditional laboratory forensics. You have, routinely, telephone analysis, computer analysis, cell site analysis and a range of other experts being brought in. It is very rare that all of that work is done by one provider. The police also do a lot of that in-house. They do the fingerprints and a lot of the computer forensics. If you read the Handbook of Forensic Science you will see that models have been built within the NPIA and police services to manage that, to have oversight of that, through their specialist advisers who now have a job to make sure all that work is brought together. Similarly, through the National Forensic Framework Agreement, all the companies are bidding for all the work. The major providers are able to take on, broadly, the full range of work that the Forensic Science Service is able to do. The practical experience is that, where it is vital and where it is necessary, the work is not fragmented. It is sent to one provider. However, that is in the context of the broader picture where there always has been some fragmentation, but with methods to deal with it.

Q294 Chair: That last answer seems to indicate to me that you would be in favour of the protection of the archive in Birmingham as a single entity.

Andrew Rennison: For many reasons, I am. Perhaps I can close with one point, as time is running short. The discussions you have had here about the archive concern the case files in there. Very careful thought has to be given to what happens to those. An equally important issue for me is the many research papers and validation papers locked up in that archive which have never been published. They have to remain accessible and available. We might even look at opportunities for publishing some of those in the future. The archive covers a lot more than just case files. We must hang on to that information.

Chair: Gentlemen, thank you very much for your attendance this morning.

Examination of Witnesses


Q295 Chair: Good morning, gentlemen. I am sorry we are running a few minutes behind schedule. It has been an interesting session this morning. Minister, we know who you are. For the record, Dr Webb, would you introduce yourself?


Q296 Chair: Your title has changed in front of me. Minister, at what point did the Home Office decide to wind down the FSS and what evidence was it based on?

James Brokenshire: It became apparent, towards the end of September-October, that the FSS was in some considerable financial difficulties and that, in essence, its available cash would run out by the early part of this year—around January 2011. Presented with this very difficult situation with the FSS, we considered a number of options in terms of how best to address the situation. We came to an initial decision around November and then sought collective agreement before making the decision and the announcement that I did on 18 December.

Q297 Chair: So this was a financial decision?

James Brokenshire: The decisions that we took in relation to the FSS were largely commercially driven, but with the clear recognition of the impact and the overall role that the FSS plays in relation to forensics and the role that it plays for the police. It was largely a commercial decision, recognising the broader issues that arise here.

Q298 Chair: What other options did you consider and why were they ruled out?

James Brokenshire: There were, in essence, three principal options that were available. It is worth noting that the FSS is a GovCo. It is, therefore, subject to the Companies Act and various other legislative requirements and there were three options potentially available. In essence, the first option was allowing it to go into administration, which we immediately discounted because of the impact that would have on the criminal justice system and our fundamental desire to ensure there was integrity within the criminal justice system. The second option was some form of restructuring. In other words, to invest further to see whether there was a way of retaining the FSS in some
form to be able to break even moving forward. The third option was, obviously, a wind-down arrangement, which was our ultimate preferred option in terms of dealing with the situation and taking things forward.

Q299 Chair: Why was the middle one ruled out?
James Brokenshire: It is worth talking about some of the evidence and issues that we looked at in the context of forming our decision. One important part of that was an assessment of the size of the market and what was expected to happen in the future. The estimate that we received, in terms of the size of the existing external forensic market, was around the £170 million to £160 million range and that was projected to reduce to around £110 million by the end of 2015. We looked at that and at the fact that every time the FSS had gone out to the market as part of the procurement framework, it had lost business—every time that it had sought to go out to the competitive market and when police forces tendered for the work. Seeking to examine the issue of a reducing market with the FSS having a declining share of that market, we recognised that if we allowed ourselves that, by investing what would be a significant sum of money, that sum of money would, potentially, be smaller than the revenue that the FSS would be receiving in that reduced situation. From a value—

Q300 Chair: Hang on a second. Some of this is funny money recycling round the Home Office. Money is being spent by police forces up and down the country in building laboratories and so on. Wouldn’t that money be better spent in purchasing services directly from a semi-autonomous operation rather than building their own?
James Brokenshire: If you are to harness some of the efficiencies and improvements we have seen in the forensics market, which have been garnered by virtue of the private sector coming into a more commercial market, you need to look at it against that backdrop in terms of seeing those improvements and the value for money and, I suppose, driving our decision that we felt that the external market is best provided on a fully commercialised basis.

Q301 Chair: But I asked you about police forces. The police forces themselves are spending significant sums of capital in building laboratories.
James Brokenshire: You are right. There has been some investment in relation to police forces and some of the work that they have been doing around, for example, triaging—the assessment of how best casework should be delivered and how best forensic testing should be delivered. But I think there is a distinction to be drawn between some of the internal work that the police are undertaking and the external market, going out and providing those services externally.

Our judgment was that that external market was best provided commercially, so that the police could then get more value for money and could see further improvements on the performance of the forensics providers, and that that was best addressed through a commercial situation rather than the situation that had preceded, where the FSS had been set up as a GovCo to move forward to a fully commercialised market but had got stuck. It had got halfway there but had then been left in limbo rather than fulfilling the original intention to move to that fully commercialised market. In many ways, some of the challenges and issues that we have had to address have been as a consequence of those initial decisions.

Q302 Chair: Did you consider shifting it from being a GovCo to another status within Government operations?
James Brokenshire: It is worth underlining some of the other constraints that exist, particularly around state aid and the state aid issues that prevail in relation to this, given that a semi-market has been established with around 40% in the pure private sector and around 60% residing with the FSS. Therefore, the Government has to act within that framework of state aid. It can’t simply continue to fund money on a pro tem-type basis. State aid requires us to look at a restructuring either to get to a break-even position or to some sort of liquidation position. Against that backdrop, seeking, perhaps, to nationalise it all over again was not an option that was attractive either from the commercial aspects that I have already talked to or, equally, the restrictions that exist around state aid.

Q303 Chair: Who exactly was consulted, both within the Home Office and externally, and what scientific advice did you seek?
James Brokenshire: As I have indicated, the issues and challenges that came up were, in many ways, of a commercial nature. Our discussions were focused on, obviously, the Association of Chief Police Officers, the NPIA and the policing sector. Equally, we did go out to the criminal justice sector to obtain their input in relation to the integrity of the criminal justice system. Obviously, the Home Office scientist, who has just given evidence to you, was notified in advance of the decision that was announced on 18 December.

Q304 Chair: But not the CPS?
James Brokenshire: The Crown Prosecution Service was engaged. They were consulted as part of this process. Clearly, the robustness of the criminal justice system is something that I hold very dear and we were very clear in ensuring that that was maintained in the decisions moving forward.

If you are looking at the three options that were presented to us, in essence, an uncontrolled administration was rejected on the basis of the impact that would have on the criminal justice system. Clearly, we looked at the issue of the restructuring and what that might mean but, ultimately, the broader commercial issues that were engaged meant that could not take place. Therefore we went to the wind-down. The CPS was engaged, via the Attorney-General, through the clearance processes in making sure that there was satisfaction across Government in terms of the decision that we took in relation to the wind-down.

Q305 David Morris: What is the estimated total cost of winding down the FSS to the taxpayer? Can you
give both figures excluding and including the anticipated savings from closing the FSS?

Q306 David Morris: Thank you. Could you provide a breakdown of how the £70 million provision for the Crime and Policing Group, identified in the Spring Supplementary Estimates, will be spent?

James Brokenshire: The indication that I have given, and Stephen Webb may wish to supplement the answer I have just provided, is around those specific elements on pension and property costs, given that you are looking at lease liability issues, potentially, and, obviously, redundancy costs. It is all those elements grouped together in relation to the £70 million that was included in the estimates. As I have indicated, we will be working, as part of the transition and the work moving forward with the programme, to seek to mitigate those potential contingent liabilities.

Stephen Webb: We took it as a prudent assessment of what we thought might be required. As the Minister says, there are a number of areas where negotiations are going on—for example, with the trustees of the pension fund. It is hard to break it down precisely at the moment. We would certainly be looking to come in below that sum if at all possible.

Q307 David Morris: Thank you. Minister, can you explain what “rescue aid” and “costs associated with the FSS transition” are for? How did you arrive at these figures, given that the transitional arrangements are still unclear?

James Brokenshire: The rescue aid payments that have been made are, in essence, to cover the costs of stabilising the FSS and to manage the operational losses incurred during the period of the wind-down—they are very focused on those elements—and also to cover the costs of a round of voluntary exits associated with urgent structural measures to stem loss-making activities. That is where the rescue aid-type funding has been focused in relation to those payments.

Q308 Chair: During this transition, the highest priority must be the integrity of forensic science. Are you geared up to the possibility, because it is a very complex transformation that is going on, that this could take longer than you have proposed, provided that you put forensic science at the top rather than the simple balance sheet issues?

James Brokenshire: I do take the issue of forensic science very seriously and I am very pleased that you have taken evidence from the Forensic Science Regulator and also Professor Silverman. Obviously, they will have talked specifically about the impact on forensics more generally, on the issue of research and development and innovation. It is clear that that R&D and that innovation resides not simply in the FSS but more generally in the private sector and that there is some important and good work that is being undertaken in the private sector.

When we analysed the timetable in terms of the statement that we made in relation, effectively, to the full wind-down of the FSS by spring of next year, we were careful in considering the reasonableness and appropriateness of that timescale. We have not been given any indication, to date, that that can’t be achieved, but, clearly, I will focus on this on a continuing basis.

Q309 Chair: Clearly, it can be achieved. You can close it tomorrow.

James Brokenshire: No, but achieved in a careful and measured way taking into account the interests of the criminal justice system, the interests of justice and also considering carefully, as I am sure you may well come on to, the availability of R&D case reviews—in essence, all the information that is currently retained and held by the FSS in connection with previous investigations that they have undertaken. I am seized of that in the work moving forward in ensuring that there is integrity, confidence and assurance given around all of that, albeit, as I have said, the indications in achieving all of those aims, we believe, can be achieved by spring of next year.

Q310 Stephen Mosley: Moving on to look at forensics research and development, did you make any assessment of the likely impact of the FSS’s closure on forensic science R&D in the UK before you made the decision to close the FSS?

James Brokenshire: There was no formal assessment of the R&D elements as such but I was very conscious, in making this decision, of the potential impact on R&D. For example, if we had gone down the restructuring route, one of the things I was specifically concerned about was the fact that R&D investment would have been significantly squeezed as a consequence of taking that option rather than any other option. While there was no formal assessment, it would be completely wrong to characterise the decision as not considering or not taking account of the issues of R&D and future investment. Indeed, I am very conscious of that and that is why Professor Silverman has been engaged to conduct the review he is conducting at the moment.

We have seen that private companies are very much investing in research and development and innovation moving forward. Therefore, our expectation is that there will be increased investment in this field as the private sector’s share of the market continues to expand and grow as we move through that transition. That was very much our expectation and our consideration when the decision was taken to opt for the wind-down as contrasted with the restructuring, which were the only two realistic options on the table for us.
Q311 Stephen Mosley: When it comes to that Home Office review that is currently being undertaken, do you think it would have been sensible for that review to have taken place before the announcement on the FSS was made?

James Brokenshire: No. The reason I say that is that the FSS is only one part of this. You need to look at the academic institutions and at the investment that private companies and others are undertaking as well. Also, consider that we were presented with a situation where the FSS, as a consequence of the Companies Act, were saying to us that they were in a zone of insolvency and that they would be at risk of going into uncontrolled administration unless some form of action was taken by the Home Office, which would not have allowed a proper review, at that stage, of these issues. That is why I talk about this being a commercial decision. It was not that it was only focused on commercial issues, but it was driven by the fact that the FSS was presenting itself as being in a zone of insolvency and of physically running out of cash. That is why the decisions were taken in the way they were.

I see the review that Professor Silverman is undertaking, which will be coming forward shortly, as instrumental in setting out where forensic research is at the moment, how it may need to be better joined up and how we need to have a better understanding of that. But I see that as distinct from the decisions that the Home Office had to take in relation to the FSS.

Q312 Stephen Mosley: Essentially, you are saying that the current review will have no influence over the future of the FSS.

James Brokenshire: The review that Professor Silverman is undertaking is looking at the whole issue more broadly in the innovation economy, if I can describe it in those terms. We had to take a decision in relation to the FSS based on its financial position and that decision needed to be taken in pretty short order, given the position presented to us. In essence, the review that is being undertaken will be instrumental in shaping Government policy and the way in which our focus on forensics moving forward on the investment side will be further developed. In terms of the decision that we were forced to take in relation to the FSS as a company, as an entity, that needed to be taken in a much speedier fashion, taking account of the pressing business and commercial needs of that company at that point in time.

Q313 Stephen Mosley: The review is due to report within a few days, isn’t it? It is due to report by the end of this month. If the review’s findings indicate that the FSS should remain in one form or another, from what you have said, you would not be changing your policy on the FSS because of that.

James Brokenshire: You have taken evidence from Professor Silverman and, no doubt, he will have responded on some of these points. The review, as I understand it, and Professor Silverman is independent of me, is looking at the broader issues in relation to investment and the development of research and development around forensics wherever it may reside. Simply characterising this as, “The FSS can only provide this sort of innovation and R&D” is wrong. It is incorrect. That is not the basis on which innovation and R&D has taken place over the last few years with the commercial sector. As I have indicated, it is more about the continuing development of that work rather than the specific company or person who may be undertaking that work.

I want to see forensics further developed, further flourishing and further enhanced so that our police forces and the criminal justice system can benefit from that. I am quite sure that Professor Silverman’s review will provide some very helpful and useful information in that connection.

Q314 Stephen Mosley: I certainly hope so. It is due within the next week or so. How long will it then take you, as the Government, to respond to that review and give your thoughts on it?

James Brokenshire: I think, Mr Mosley, that that will depend on what it says. Therefore, I wouldn’t want to pre-judge in any way. I will certainly give you an assurance that I will consider it carefully and properly because the use of science in the development of our policy and the availability of enhanced scientific techniques is an essential part of the continuing development of our work. I very much look forward to and anticipate his review. We will consider it extremely carefully and act in an appropriate way in terms of taking that forward.

Q315 Gavin Barwell: I want to go beyond the specific decision to close the FSS. I want to start by asking you a general question. What is the Government’s strategy for forensic science?

James Brokenshire: As I have indicated, Mr Barwell, our view is that the external forensic provision to the police and the criminal justice system should be on a fully commercialised basis. We believe that significant benefits have already accrued to the police and the criminal justice system as a consequence of that in terms of efficiency savings and almost equally, if not more importantly, in relation to enhanced performance, reliability and driving up standards. Our approach is very much about ensuring that we have a fully commercialised market around forensic provisions for the criminal justice system. That is at the heart of our approach and underlines the decisions that we have taken in relation to the FSS.

Q316 Gavin Barwell: Who are forensic science providers providing a service to? Who is the client?

James Brokenshire: I know that this is a question which has come up in your previous deliberations, whether the client is the criminal justice system or someone else. On a contracting basis, the immediate customer is the police as part of the National Forensic Framework Agreement or other contractual provision for the provision of those services in the external market. Ultimately, it is not in isolation. It must have that clear eye to the broader criminal justice system. The information provided and the reliability of the evidence provided clearly points to the courts. Therefore, while the contracting party is the relevant
police force, it cannot be viewed in isolation. It has to be viewed in the context of the integrity of the provision of forensic services to where they will ultimately be used, which is in the justice system and the courts.

**Q317 Gavin Barwell:** Do you see any tension between those two? The Forensic Science Northern Ireland stated in their evidence to us: "There are two very different customers for any forensic science provider; the police, who want fast low cost support to their investigation and the Courts, who are inherently cost-blind and want very robust, independent and objective expert witness in support of justice, whether that means conviction or acquittal." Do you agree that there is a tension or do you not see that?

**James Brokenshire:** No, I don’t see a tension per se. If you consider, for example, the issues around fingerprints, which are largely undertaken by police forces internally in terms of fingerprint analysis, and the way in which police staff are able to present information robustly and clearly in relation to fingerprint analysis before the courts, which is used as a matter of course, there have not been any clear tensions or issues. Obviously, the CPS is seized of that. We have not received any indication from them that they have concerns about the way in which we are approaching the wind-down of the FSS as part of this. Clearly, as part of the Forensics Transition Board, which is managing the wind-down process, and the Forensics Transition Advisory Group, which sits alongside that, there is representation from the CPS and other important stakeholders within the criminal justice system. As a result, we can continue to monitor this and receive that feedback should there be any emerging issues.

**Q318 Gavin Barwell:** Finally, how do you co-ordinate forensic science strategy with the Ministry of Justice and stakeholders outside the police? Obviously, the police sit within the responsibilities of the Home Office. In terms of engagement with the Ministry of Justice and with other stakeholders outside the police service, how do you co-ordinate that?

**James Brokenshire:** As I said, in terms of how we are managing this process, the Forensics Transition Board is leading the approach around the key decisions, very much informed by the Forensics Transition Advisory Group which includes all of the broader stakeholders—Professor Silverman being one of them—as well as the CPS and others. That is the governance structure that we have put in place to manage, at this important time period, this significant programme of work so that there is that formal way in which information, concerns and issues can be provided as part of our implementation of this work to ensure there is a mechanism for hearing concerns and issues as they may arise.

**Q319 Chair:** On this issue of the customer, can you think of any other area of Government procurement where the customer changes so fundamentally—in fact across to another Department? Initially, as you say, the customer is usually the police force, but, subsequently, the customer becomes the Ministry of Justice.

**James Brokenshire:** That arrangement is part and parcel of the criminal justice system that we have. The CPS works in conjunction with the police, with the Director of Public Prosecutions being linked in through that. While there is the issue of residing in, potentially, two different Departments, there is the join-up and understanding between the relevant agencies involved that their work can’t be in isolation. That is the nature of policing. Policing, if it does its job, will automatically feed through to the criminal courts.

**Q320 Chair:** The reason I ask is that one of the things we need to consider is whether the unusual nature of that relationship requires something other than simply a commercial decision.

**James Brokenshire:** Yes, I understand your consideration around that. It is not simply commercial considerations, as such, but how the police operate and the way in which the National Forensic Framework Agreement operates, which has had input from the criminal justice system, the CPS in terms of how that has been established and worked through. Clearly, it does have that broader read-across and that understanding in terms of the nature of the services being provided. I would not wish to give the impression that it is wholly in some isolated place. It is looking at that issue of evidence in that broader sense.

**Q321 Stephen Metcalfe:** We all agree that it is very sad for the FSS that it was not able to transform itself rapidly enough and that the envisaged market did not develop in the way, probably, it had been thought. Do you think that market, in the early days, should have been better regulated to ensure that the police in-sourcing did not damage the commercial prospects of the FSS or, indeed, commercial providers?

**James Brokenshire:** Perhaps I take a different view in relation to this. The FSS’s challenges were that it was set up as a GovCo with the intent of establishing some sort of private-public partnership or moving to a fully commercialised basis. But it got stuck. It had an inherently high cost base attached to it which fettered its ability to compete when new contracts became available through the National Forensic Framework model and, consequently, continued to lose business every time a police force or a region came through seeking to procure its services. I would characterise that as being the weakness rather than the unusual nature of the challenges around that. It was largely that the FSS was not, perhaps, in the right state and condition to be able to compete in an increasingly competitive market. Therefore, structurally, those issues were, in some ways, the impediment.

As you say, everybody is sad that the FSS has not been able to develop in the way that, certainly, I would have wished if I had been there at the time. I was not. That was a decision taken under the previous Government. But it is the reality of where the FSS ended up and, perhaps, how this had not been thought through—the issues of where it was intended to go,
that somehow it did get stuck and that it did not move forward in terms of the development of the market and enabling the FSS to flourish within it. That is why we have had to sort out a number of the problems that we are doing now.

Q322 Stephen Metcalfe: We have talked about the fact that the market is declining or the amount of external spend by police forces is declining, potentially, to £110 million. Do you think that the in-sourcing has created that volatility within that market?

James Brokenshire: Clearly, savings have been achieved by virtue of the market itself, and some of those reductions can be attributed to that. When we talk about in-sourcing, we are talking about a mixture of things, with the police, perhaps, being more focused on the nature of the forensic services they are seeking. It is not necessarily them being provided internally or externally but assessing, more effectively, what forensic services are needed in a particular case. The interrelationship between police-provided internal services as against police triage and assessment of their forensic need, whether that be external or internal, as well as the provision of services in the external market, is a complex position. There is a fair degree of complexity around this and I would not necessarily point to one issue being more significant than any other. There is a range of factors that all interrelate here. I would not necessarily place the greatest amount of weight on any one of those specific factors.

Q323 Stephen Metcalfe: We have discussed who the client is, the police or the criminal service, and we want to make sure that their forensic science needs, whichever one it is, are fully met. Do you believe that a wholly market-led approach can deliver all their needs?

James Brokenshire: It is not me saying that. It is the police saying that. The decision we took was very much informed by the views of the Association of Chief Police Officers, and when we were considering the options available in respect of the FSS, that was one of the key questions. We asked them whether they were satisfied that the relevant services could be provided in the market and the time scale for transition to that commercialised market. The clear view from ACPO was that it could be. It was not me making that assessment in isolation. It was very much informed by the views of the Association of Chief Police Officers in terms of examining that.

Q324 Gavin Barwell: What influence does the Home Office have over what the police spend their budgets on?

James Brokenshire: Clearly, we set the overall budgets for individual policing, but it is for individual police forces to make the determinations as to their need. Certainly from the Home Office, we don’t see it as our role to micro-manage police spending in relation to the activities of the police.

Q325 Gavin Barwell: If some of the major police forces decided that they wanted to increase significantly the level of forensics work they carried out in-house, you wouldn’t have a problem with that?

James Brokenshire: We are looking carefully at the issue of mandation. On this issue, it is the collaboration between police forces as to whether they are best able to harness their resources and work together more effectively. Certainly, efficiencies have been delivered and can continue to be delivered by that approach. We will continue to consider forensics in that context. We made the decision not to use mandation at this point in time, given the nature of the forensics transition work around the FSS, mandating, for example, that all police forces should go out to the National Forensic Framework Agreement. It is something that we will continue to keep under review, moving forward, in terms of the utilisation of mandation to see that police forces are harnessing money effectively in that context. It is in that mandation framework, which has been allowed and permitted on the way in which the police service procures certain contracts and services and facilities to itself, that that may arise. It is potentially available, albeit it is not something that we are intending to use at this point in relation to forensics.

Q326 Gavin Barwell: Can you give the Committee an idea of the scope of those mandation powers? You are saying that you are not at the moment considering using them, but what powers would you have should you choose to use them? What does it allow you to do?

James Brokenshire: On mandation, the Government will decide whether to proceed with the services regulations that we have. The effective mandation could be, for example, that nothing bought in the market in the future by the police could be undertaken outside of the National Forensic Framework Agreement that is being delivered. That would prevent in-sourcing of anything bought in the market that is available through the National Framework. Regulations could be amended in the future, for example, to address successor frameworks when the current National Framework expires. It could be used in that way. It is something that we will continue to keep under examination. At this point in time, with the transition of the arrangements with the FSS—the transition that is taking place—now is, perhaps, not the time to be using that.

Q327 Gavin Barwell: You said in your written statement of 14 December that you decided to support the wind-down of the FSS because your firm ambition was that there would be no continuing state interest in forensics provision. Isn’t the reality that we have quite a significant state interest in forensic provision through the police service and that that has grown?

James Brokenshire: I think what that was intending to point to was in relation to the external market. As I have clearly indicated, the desire is to move to a fully commercialised external market for the provision of police forensic services. If there is some slight inelegance in the wording of that language, that is what it was very much intended to point to, recognising that there are—I have already talked about fingerprints—forensic capabilities that reside
within the police service itself that have worked quite effectively over the years. Therefore, in itself, that should not be taken to say that we are looking to strip everything out of the police in that manner. There will always be a balance to be struck between the two.

Q328 Gavin Barwell: Isn’t there some intellectual confusion here? The internal market grows, and that is clearly one of the factors that has led the FSS to get into the difficulties that it has, and the Government takes the decision to wind down the FSS. It wants a genuine market but it doesn’t want to do anything about the state provision that is growing which has led to part of the problem, or at least has contributed to the problem. It hasn’t wholly caused it.

James Brokenshire: As I say, and as I said to Mr Metcalfe, this is a very complex arena in terms of the interrelationships between the two. When the commercial market is allowed to flourish properly and effectively, as we intend with the wind-down of the FSS, it will drive further efficiencies and underline the quality and assurance which can be obtained through the private market. That, itself, will have an important part in ensuring that the market clearly demonstrating to police forces that that is a very effective and cost-efficient way of delivering. Certainly, that is what I hope will happen as we move forward.

Q329 Gavin Barwell: I have two final questions. Have you had any concerns from private sector forensic providers about the size of the internal market and changes in the size of the internal market?

James Brokenshire: Not as far as I am aware. Clearly, we want to see a successful and flourishing external market for providers that is robust and able to deliver on our intentions. That is one of the issues we have in terms of the drivers that the Forensic Transition Board looks to in relation to the health of the market moving forward, given the interest that we have in the criminal justice system and ensuring that that is robust and delivers on what we intend it to—on further innovation and on further quality standards, on that provision to the criminal justice system. I am sure that there will be points that may be made. Indeed, you may have received some points yourselves. It is something that we are examining carefully and are keeping under close review as part of the transition work.

Q330 Gavin Barwell: Let me end on that point. You said, earlier on in your evidence, that the advice you were given back in September-October was that the external market was of the order of £160 million to £170 million, but was projected to decline to £110 million by 2015.

James Brokenshire: Yes.

Q331 Gavin Barwell: We have received evidence during this inquiry that a decline of that scale has already happened in the current financial year. You are keeping this under close review. What is your current estimate of the size of the external market?

James Brokenshire: That is certainly not our assessment or the assessments that we have received in relation to the state of the current market. The most recent estimate that I have received through the NPIA indicates that the market is around £138 million in the last completed financial year. We don’t see it as having reduced down to the £110 million figure that I had indicated. That was more towards the 2015 number that was what informed and helped us in terms of the decision that we took in relation to the wind-down decision.

Stephen Webb: The £170 million was a 2009–10 estimate.

Q332 Gavin Barwell: If it has gone down by £20 million to £30 million before any of the reductions in police-public expenditure kick in, that might suggest that the £110 million figure for 2015 might well be significantly less than that.

James Brokenshire: It would be wrong to speculate around that. We can only work to the information that we have received from PWC and HMIC, who looked at this at that point in time. Clearly, efficiency savings have been made by the police. The way in which they are procuring services is quite clear. I don’t necessarily see it in the way that you have characterised it.

Q333 Chair: You don’t want to micro-manage police budgets. That is understood. Nevertheless, you have approved a series of police budgets as a Minister. Have you totted up the total amounts in those budgets that you have approved for allocations for capital expenditure on forensic science in-house laboratories?

James Brokenshire: Again, the way in which capital expenditure is allocated between police forces does not have that level of granularity, if I can describe it in that way. In essence, funds are made available to individual police forces and then it is for the police forces, in conjunction with police authorities, to determine their own budgets in that regard as to how they spend their capital and revenue. Obviously, I have talked to the reserve powers in relation to mandation on the potential procurement of services externally. Certainly, reserve powers exist in terms of seeking to encourage and promote collaboration between police forces.

Q334 Chair: If I was a commercial provider and I was going to bid for the services that are now provided by the FSS, how on earth could I be certain of the state of the market when the Minister himself hasn’t got a clue how much work is going to be taken in-house by police forces?

James Brokenshire: The point, Mr Miller, is that is the way in which the National Forensic Framework Agreement operates at the moment with commercial providers already providing those services.

Q335 Chair: I understand that. Can’t you see that it does provide a fundamental problem from the perspective of a potential commercial provider?

James Brokenshire: No. What I would say to that is this. The police, who are looking at value for money and at the effectiveness and quality of the services that are being provided, will look to the private sector to assist them in delivering on this. As I say, I think
the commercial market will ultimately lead to greater outsourcing in terms of the way in which these issues are provided. It would be wrong for the Government to fix the market in some way, given there are a range of different variables that would operate in this way.  
Chair: Let us look at the police a little more closely.

Q336 Graham Stringer: Let me go back to your answer to Andrew. I find it incredible. Are you really saying that the Home Office doesn’t have the capital expenditure plans of individual chief constables and police authorities?

James Brokenshire: We will be provided with information, but ultimately it is for those police forces to make those decisions.

Q337 Graham Stringer: I understand the difference between control and information, but you do have the information, don’t you, on the capital expenditure on police laboratories?

James Brokenshire: I am happy to investigate further in relation to this and provide the Committee with what information we have around this detail, but my clear understanding is that it is for police forces to determine how they spend their capital expenditure and how they utilise that. I don’t think I can add anything further to that.

Q338 Graham Stringer: I understand where the responsibility lies, but I also know that all police authorities and chief constables provide you with that capital expenditure. Given that, clearly, from your previous answers, you have read this Committee’s previous deliberations, I am surprised that you have not come here with that information.

James Brokenshire: Mr Stringer, I hear the point that you have made. But I would say that it is for individual police forces to determine how they spend that.

Q339 Graham Stringer: That is not answering the point, with respect. Secondly, the issue is not as complicated as you say it is, is it? Police forces have changed from being customers of the FSS to being competitors. They have taken work in-house. They have taken this work in-house without proper quality control. Why has that been allowed to happen?

James Brokenshire: You could ask that question of previous Ministers in relation to the decisions that were taken and arose at this time. The Forensics Regulator is there, who you have taken evidence from earlier in this session, and is working very closely with the Association of Chief Police Officers to ensure that there is that quality assurance. Let us not forget that it is in the interest of the police as well to ensure that evidence is provided to the appropriate standard. It would not be in their interests, in the surety of the way that the police operate or, indeed, in the way the criminal justice system operates, for that not to be the case. As I have already indicated, in relation to issues like fingerprints that has operated quite well.

Q340 Graham Stringer: So you are not concerned about this proliferation without proper quality control as the Minister responsible? That was the question.

James Brokenshire: Of course I am concerned to ensure appropriate quality is maintained—that is why I have the relationship with the Forensics Regulator that I do—and how the Forensics Regulator is working with ACPO to ensure that relevant laboratory standards are undertaken. That is why I will certainly be guided by him, very clearly, in relation to concerns that he may have over quality standards in ensuring that, in fulfilling my role, the criminal justice system can rely on the information being provided through that route.

Q341 Graham Stringer: The FSS, as I understand it, is complying with ISO 17025 and many of the police authorities are not. While you say you are concerned about standards, are you concerned about that? Are you concerned about the impartiality of the police providing their own forensic evidence?

James Brokenshire: As I have indicated in relation to ISO 17025, the Forensics Regulator is working very closely with the Association of Chief Police Officers to ensure that accreditation standards are developed further. Indeed, I am sure you will have raised this issue previously with the representatives of ACPO who appeared before this Committee. I know how seized they are in connection with the issue. Also, the Crown Prosecution Service has a key role to play in relation to this. Again, they are very much part of the process that we have developed in relation to the transition arrangements. If there are concerns that emerge from the CPS, which has a direct interest and a direct stake in ensuring that information provided to their prosecutors is robust, can be relied upon and will deliver on that sense of justice, then certainly we will act on it.

Q342 Graham Stringer: Is it time to give the Forensic Science Regulator statutory powers?

James Brokenshire: It is something that I am certainly prepared to consider. The Forensics Regulator has operated, to date, without statutory authorisation and has operated very effectively in that way. But it is something I am prepared to consider if Mr Rennison feels he is not able or is coming up with issues in terms of his ability to deliver on his requirements in relation to standards and quality and giving the assurance that we want him to give.

Q343 Graham Stringer: Are you confident that all of the FSS’s current work will be transferred to fully accredited providers by the deadline of 2012?

James Brokenshire: We are confident that the deadline of 2012 can be achieved and that it can be undertaken in a way that does give the necessary assurance. That is why the Forensics Regulator is part of the advisory group we are engaged in and that is why we are undertaking it in the time scale that we are and in the manner in which we are. Having that robust approach in relation to the criminal justice system and giving the assurance that, rightly, Mr Stringer, you are pushing me on is something I am very conscious of in fulfilling my duties as a Minister in relation to the criminal justice system so that the courts and those who use the forensics that are developed can rely on that in that way.
Q344 Graham Stringer: What I am trying to get at with that question is this. Will all the work be transferred to accredited providers or will some of the providers be police laboratories that are not accredited?

James Brokenshire: If I can put it this way, there are various different options that are potentially available in relation to transition which we are obviously developing in parallel. They are, potentially, in-house provision that some police forces may be looking at. It is worth noting that a number of laboratories are accredited to ISO 17025. The Metropolitan Police and Derbyshire constabulary are certainly two of the laboratories that are accredited. Potential options exist there. There is, obviously, the National Forensic Framework Agreement, in other words, procuring services in the external market, as well as potential options for acquisition of the business and assets, or part thereof, of the FSS. Obviously, the FSS’s laboratories are accredited in that way.

In terms of the three potential options available as to how the existing FSS business or the revised business and the needs of the police are procured and provided, those are the three specific routes being adopted as well as the broader work that ACPO and the Forensics Regulator are engaged in on looking at those existing police laboratories that may be currently utilised in ensuring they are properly accredited. That is not to say that the work being undertaken is not appropriate or reliable. It is giving that assurance externally that ACPO and the Forensics Regulator are understanding.

Q345 Graham Stringer: So some work might go to non-accredited laboratories?

James Brokenshire: In terms of the work that is engaged at the moment, we are focused on the National Forensic Framework Agreement and the potential for asset sales. Obviously, some work may go to the police internally. My strong intention and desire is that that should give assurance and be robust in terms of the way in which this is delivered. There is no reason to suggest that will not happen.

Q346 Graham Stringer: I agree with you that we are all concerned to make the criminal justice system work as effectively as we can. How did you assess what the impact of closing the FSS would have on the criminal justice system? What evidence did you look at?

James Brokenshire: We consulted with the Ministry of Justice and the Attorney-General’s Office in connection with the decision that was taken and listened carefully to whether concerns were identified as part of that. There was agreement to the approach that was taken. We are taking that work forward now in terms of the Forensics Transition Board and the advisory group that sits alongside it to ensure that issues relating to the criminal justice system are properly addressed.

Q347 Graham Stringer: What evidence did you look at?

James Brokenshire: As I have already indicated, Mr Stringer, the decisions that were taken around the wind-down versus any other options were driven by commercial issues, looking at the financial position of the FSS and the issues in relation to the market. Any decisions that we took were in the framework of considering the potential impact on the criminal justice system.

As I have already said in response to a previous question in relation to Mr Miller, we immediately discounted, for example, the approach of going into some sort of unmanaged administration precisely for the reasons as to the concerns we would have on the integrity and support to the criminal justice system. It is not that it is a question of evidence as such. It was an analysis on the potential issues and ensuring that the criminal justice system could be assured and maintained in whatever process we moved forward with. That was very much at the heart of the decision that we took.

Q348 Graham Stringer: I understand that and I find it quite worrying, really. You read the transcript of the evidence that we took on 23 March, did you?

James Brokenshire: I have looked at some of the evidence but maybe not specifically at the point that you are seeking to talk about.

Q349 Graham Stringer: Dr Tully is in charge of research and development at the FSS and it is her evidence I am concerned about. This is at the heart of whether the criminal justice system works or not. I asked her whether this change meant that more rapists and murderers were likely to get away with things. She gave two examples, which I can read out, if you like—one was a cold case example and one was a current case—where the police had failed with the forensic evidence. It had come to the FSS, they had sorted the problem and people had been convicted quite quickly. That worries me because that looks to me like pretty solid evidence this change might mean that cold cases won’t be investigated and current cases will not reach the right conclusion of guilt.

James Brokenshire: Absolutely not. If that was a concern you had, that is very much part and parcel of the issues that I have, front and centre, in terms of the way in which we are managing this process and the certainty that I am seeking as part of the manageable wind-down approaches. There is no reason to suggest that the private sector providers would not be able to deliver on precisely those services that you are, I think fairly, drawing to both my consideration and the Committee’s consideration.

It is worth highlighting that, in the past, the FSS itself has had some quality issues. There have previously been situations where private sector companies had been brought in to look at the work of the FSS. It is more looking at issues of quality and assurance than any one specific provider. I am very clear in the way in which I and the Home Office are approaching this issue of ensuring that the criminal justice system and the police have the forensic capabilities and capacity available to them to meet their needs and requirements.

Q350 Graham Stringer: In support of the two examples that Dr Tully gave, she talked about the problem of fragmentation of expertise and casework
being disrupted if the FSS did not exist. Do you think that Dr Tully is wrong about that?

James Brokenshire: That is certainly not the indication we have received from the CPS or, indeed, the evidence that you received from ACPO in relation to the way in which cases are managed. There is no reason to suggest that there will be greater fragmentation as a consequence of the changes that we are seeking to introduce.

Q351 Graham Stringer: So you really don’t think that there will be a disruption of the continuity of criminal cases?

James Brokenshire: I do not see that as part of the risk based on the information that I have received. Clearly, the evidence that I received from ACPO—and, indeed, the evidence that you received—gave assurance that the way in which cases are managed would not lead to that. If you look at the National Forensic Framework Agreement that already exists in the 40% of the market that is already wholly in the private sector, that does not tend to point to the type of risks that are perhaps being alluded to, albeit that it is an entirely fair point for you and others to make and to seek assurance on.

Q352 Chair: I would certainly invite you to read the evidence from Roger Coe-Salazar from the CPS because he specifically expresses the concern that Mr Stringer has just spelt out.

That leads on to the final questions. One clear factor, which we dealt with earlier on this morning, in protecting the integrity of the work of the FSS is that one of its key assets is the archive. Is it your view that the archive needs to be protected and developed as a single entity?

James Brokenshire: It is a key part of the work strand that we are engaged around on the most effective use of the existing archive and, indeed, broader work on archiving more generally in relation to forensics. I am open-minded at this point in time as to whether that best resides in one receptacle or whether it can be provided in a different way in different places.

Q353 Chair: If any fragmentation of that archive were, potentially, to put at risk the capacity of the broader service to deal with, say, for example, cold cases—

James Brokenshire: I am very alive to this issue of cold cases. That is why I am seeking specific guidance and advice and giving careful consideration to this point in relation to securing that archive and ensuring information is available for cold case reviews. It is absolutely essential that it is available in a joined-up way, I will look very carefully and closely at the evidence and advice that is given to me in terms of the best way to achieve that. It is something that I am particularly seized of as part of this process. This enables us to look at this issue more generally as well.

Q354 Chair: Finally, could you give us a brief update on what has been decided thus far by the Transition Board?

James Brokenshire: I did write out to police forces and police authorities fairly recently in respect of the work to date and the steps that were being taken. I could read you through on the next steps and time scales, but it may be more sensible for me to provide the Committee with a copy of the letter that has been sent out to police authorities, commissioners, etcetera. That should provide you, Mr Miller, if I may suggest, with a good chronology of the work that is being undertaken. Perhaps that would be the best way of addressing this, rather than rapidly trying to canter through in an oral evidence session.

Chair: That would be helpful. Gentlemen, thank you very much for your time this morning. It has been very instructive.
Written evidence

Written evidence submitted by the Home Office (FSS 00)

1. The Government believes that the managed wind-down of the FSS was the right choice, both financially and for the Criminal Justice System.

2. We want to see the UK forensic science industry operating as a genuine market, with private sector providers competing to provide innovative services at the lowest cost. This will preserve police resources and maximise the positive impact forensic sciences can have on tackling crime. A competitive market can help to drive down prices and improve turnaround times, meaning serious crimes can be cleared up more quickly and efficiently. Ultimately, that is what everyone in the Criminal Justice System wants to see.

Declaration of Interest

3. The Home Office is the lead government department for immigration and passports, drugs policy, crime, counter-terrorism and police. The Home Office is the 100% Shareholder of FSS Ltd, and provides central government grants to police authorities in England and Wales.

Question 1: What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

Impact of the wind-down on forensic science

4. The forensics market has been shrinking for some time and this had put the FSS in serious financial difficulty, with operating losses of around £2 million per month within a market expected to contract further.

5. The FSS was not securing as many contracts as hoped for through the police procurement process. Other competent companies (assessed as such in order to be on the procurement framework) are successfully winning police contracts and are meeting performance requirements. There are 11 other companies on the procurement framework (of varying sizes and with some focussing on specialist areas of forensic science).

6. The Home Office’s Forensic Transition Board is overseeing the orderly wind down of the FSS and transition of work. The Board includes FSS Company Directors, ACPO, senior Home Office and CPS representatives and the Forensic Science Regulator. It has agreed a joint governance process to manage risks and issues associated with the transition and balance financial, strategic and operational decisions. In addition, ACPO and the NPIA have a comprehensive project to manage the transition of work and associated operational issues for the police service: Operation Slingshot, led by Deputy Chief Constable Ainsworth and reporting to the Forensic Transition Board.

Impact of the wind-down on Research and Development

7. Research and development in forensic science is essential to ensure the continued availability of a high quality, efficient, forensic science capability for the Criminal Justice System. This research has historically been undertaken by a wide range of organisations including the private sector, government-owned laboratories and academia.

8. The decision to support a managed wind-down of the Forensic Science Service took into account the need to manage the impact on forensic science research and development in the UK. Unfortunately, the financial position of the FSS had already limited the capacity for the research and development for which it had become renowned. During the managed wind-down, we are working closely with the police, the FSS, the CPS and other forensic providers to consider how the industry can build on existing expertise and continue the research and innovation for which the UK has become renowned. Innovation is by no means restricted to the FSS and other suppliers have developed important new tools. We believe that provided the procurement framework rewards new products, incentives for innovation should remain.

9. Although not directly related to the wind-down, on 26 January 2011 the Government announced a review of the UK’s current and future provision of forensic research, led by Professor Bernard Silverman and supported by Andrew Rennison (Forensic Science Regulator). The review will consult widely, via interviews and correspondence, with the National Policing Improvement Agency, forensic service providers and related organisations in the public and private sectors, academia, research funders, and customers of forensic science such as police services, the Crown Prosecution Service and the wider Criminal Justice System.

10. The aim of this review, reporting to Home Office Ministers by 30 April 2011, is to provide Ministers with advice on the current and likely future status of forensic science research and development in the UK and to make other recommendations as appropriate.
Question 2: What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

11. The decision to proceed with the managed wind-down was heavily influenced by the need to ensure that the CJS continues to receive robust and impartial forensic services and to reduce any adverse impact on any current or future case, or historical cases on appeal.

12. Although FSS currently hold a large share of the market, this has been steadily eroded in recent years and it has been losing market share to commercial providers in recent competitive tenders. We were provided with assurances from CJS partners that capacity and capability could be provided elsewhere in the market to fill any gaps due to FSS’ exit.

13. On 13 January, the Government announced that Andrew Rennison has agreed to a second term as the forensic science regulator, assisting us in our commitment to the continued provision of effective forensic science services over the longer term. The Forensic Science Regulator’s principal role is to set and monitor quality standards for forensic science used in the Criminal Justice System. This involves identifying the requirement for new or improved quality standards; providing advice and guidance so that providers, including commercial laboratories and the police, will be able to demonstrate compliance with common standards, and ensuring that satisfactory arrangements exist to provide assurance and monitoring of the standards.

14. The regulator is working with the laboratories, the police, the National Policing Improvement Agency (NPIA), the Crown Prosecution Service, the United Kingdom Accreditation Service (UKAS) and other stakeholders to develop and maintain the quality of forensic science services across all forensic processes from the supply of equipment used at crime scenes, the examination of scenes, the collection and storage of exhibits, the sampling from and analysis of exhibits, and the reporting of forensic science evidence.

15. An important aspect of this work is to ensure that quality standards for forensic science continue to be regulated and that the forensic science regulator plays a central and independent role in coordinated work with the Home Office, the police and other stakeholders.

16. In the short term, during the wind-down, Andrew Rennison is a member of the FSS Transition Board and will monitor the movement of forensic science services to ensure that quality standards are maintained, also that risks to quality are identified and managed.

17. The leading private sector forensic science laboratories on the procurement framework work to demanding quality standards and are accredited against ISO/IEC 17025 (General requirements for the competence of testing and calibration laboratories) by UKAS. Companies that are not accredited are expected to achieve accreditation if they undertake work for the police.

18. Accreditation against ISO/IEC 17025 is the standard adopted by the Forensic Science Regulator for all forensic science laboratory functions, is a requirement of police contracts with the laboratories and is also the standard being adopted by the police in-house laboratories. The police have agreed with the Regulator that any work taken in-house from a previously accredited laboratory will be done to the same accreditation standard. However, police laboratories, apart from the Metropolitan Police Service, are not yet accredited but are subject of an ACPO and NPIA led project to achieve accreditation.

19. Assessment of an organisation against ISO/IEC 17025 is undertaken by UKAS to provide an independent, objective and detailed assessment covering a broad range of issues including: evidence of organisational competence in terms of quality management (the management system requirements in ISO/IEC 17025 meet the principles of ISO 9001:2000 Quality Management Systems—Requirements and are aligned with its pertinent requirements); evidence of the competence of all the individual practitioners employed by the organisation (achieved through examination of training records; interviews with staff, and observations of staff at work in the laboratories), and evidence that the methods used in the laboratory are properly validated and are being used appropriately.

20. An important and fourth aspect of accreditation is a requirement to see evidence that a laboratory’s work and results are free from undue influence or pressure from customers or other interested parties, and that laboratories working within larger organisations where influence might be applied (such as police laboratories), are free from such influence and are producing objective and valid results.

21. Evidence of impartiality and validity of results sit alongside evidence of organisational competence, individual practitioner competence and validity of methods as the cornerstones of the Regulator’s forensic science quality standards framework, which is underpinned for laboratories by annual independent assessments by UKAS.

Question 3: What is the financial position of the Forensic Science Service?

22. The Forensic Science Service (FSS) was an Executive Agency which was granted Trading Fund Status in 1999, a step designed to increase its financial flexibility. At this time private competition increased and the FSS expanded its employment levels on uncompetitive terms. Then, following the 2002 MacFarland Report, the “FSS Ltd” was established as a GovCo in December 2005, wholly owned by the Government and with an £18 million loan. The intention was that this be a transitional step towards a “public private partnership”.

...
the event, however, no further progress was made. This lack of progress led in our view to opportunities for reform being missed, and continuing reductions in the value of publicly owned assets.

23. The previous Government supported the company with a further £50 million grant from early 2009 to restructure the business. Although the FSS had been successful in driving down some of its costs, the previous Government had allowed it to maintain a cost base far higher than its commercial rivals, so this was not reduced towards a level where FSS would be able to compete. FSS market share reduced, pricing became increasingly competitive and the company was unable to develop new markets to compensate. The company has met interest payments on the original loan but cannot afford to repay the principal amount.

24. Despite the Government funding and the commitment of the current management team, by Autumn 2010 it was clear that the challenging forensics market had put the FSS back into serious financial difficulty. FSS was making operating losses of around £2 million per month and running out of cash, threatening the solvency and the continued operation of the business.

25. The Home Office has therefore put in place Rescue Aid under the EU State Aid framework to meet the necessary operating losses during the wind-down so as to support the provision of effective forensics during the transition process and avoid an uncontrolled administration.

Question 4: What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

26. The forensics market has drastically shrunk in recent years, from around £170 million in 2009 towards a projected figure of around £110 million by 2015. This reflects a range of factors including increased efficiency, closer work with prosecutors, and the completion of the previous Government’s DNA Expansion Programme. The FSS’ share of the market is currently around 60%, a reduction of 20% since December 2005, and has reduced with every competitive tender that has been held to provide forensic science services to the police.

27. Looking to the future, ACPO has advised that the forensics market can cope with the managed wind-down of the FSS. We believe that an orderly wind-down will enable adequate time for other forensics suppliers to develop their capacity to meet any additional requirements. We are reviewing the FSS’ functions and contracts as part of the process of managed closure, including identifying whether there is any essential capability and capacity that needs to be transferred to other providers or which cannot be met by the forensics market.

Question 5: What are the alternatives to winding-down the Forensic Science Service?

28. We carefully considered all options before taking the difficult decision to proceed with the managed wind-down of the FSS. Our main priorities were to manage the risks to the CJS and to minimise the cost to the taxpayer. We were also advised that neither ongoing nor further restructuring would solve the key underlying problem: reducing levels of customer demand. Partners across the CJS were consulted and it was their collective view that a managed closure is in the best interests of the system as a whole.

29. The most drastic option would have been to withdraw any further financial help, which may have led to the directors placing the company into administration early this year. An uncontrolled administration would have seriously damaged the forensic capacity available, and we were not prepared to expose the CJS to that level of risk.

30. Further restructuring the FSS for ultimate sale would have been extremely expensive and there would be no certainty of achieving a sustainable position or realising any value from the company at the conclusion of this. We had to take into account State Aid and competition law constraints and concluded that, in a declining market, the cost of further restructuring would be disproportionate.

Question 6: So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

31. Throughout this process, we are doing all we can to balance the needs to minimise risks to the CJS and reduce uncertainty for the taxpayer.

32. The decision to proceed with the managed wind-down was driven by the need to ensure that the CJS continues to receive robust and impartial forensic services. Managed closure will ensure that disruption to the CJS is minimised and that forensic capability remains available. We are working with the police, CPS, MoJ and others to manage the transition and ensure the continuity of forensic services and evidential integrity for the Criminal Justice System.
33. We are aware that the decision has put FSS employees and their families in a difficult position. I am responding personally to correspondence identified as from FSS staff and I have agreed to meet representatives from Prospect, FSS’ largest trade union, to hear their concerns.

James Brokenshire MP
Parliamentary Under Secretary of State for Crime Prevention
Home Office
14 February 2011

**Supplementary written evidence submitted by the Home Office (FSS 00a)**

Following the oral evidence session there was a request from the Committee for additional information on police expenditure on capital for forensic facilities

The Home Office does not compile details of police expenditure as it is up to individual Police Authorities and Chief Constables to decide how best to spend their money.

For expenditure information we rely on CIPFA (the Chartered Institute of Public Finance and Accountancy) which compiles expenditure figures in its annual “Police Statistics” publication. Although the “Police Statistics” publication is quite detailed, it does not go down to the level of detail the Committee were looking for on police capital expenditure on forensics laboratories. We have asked CIPFA why this is not included in their data. They explained that spending on forensics laboratories was a very niche area which meant there was little or no demand for the information to be collected. However, CIPFA did say that if the Committee did want the information to be collected in future, a request could be submitted to the CIPFA-led Working Group that agrees the data-collection questionnaire that goes out to forces.

17 May 2011

**Written evidence submitted by Professor Sir Alec Jeffreys (FSS 16)**

In response to the specific questions posed by the Inquiry, I would like to make the following comments on the proposed closure of FSS. These comments are made from my personal experience as an academic and the developer of forensic DNA testing, and from my association with the FSS and police laboratories over the last 25 years.

1. **What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?**

   (a) Potentially disastrous. The FSS serves as the natural national focus for forensic R&D, taking in basic developments arising in academia from the biological, medical, chemical, physical and mathematical/IT sciences and, where appropriate, adapting and refining them for use in forensic analysis. Some of these refinements might occur in the academic sector but this is unpredictable and again, the natural conduit prior to forensic implementation should be through the FSS. Forensic developments are now becoming less common in the academic sector given that the Research Councils and Charities are reluctant to fund forensic science, seeing this instead as the responsibility of the Home Office (reflecting the origins of the FSS).

   (b) The FSS R&D staff have the range and depth of experience needed for this horizon scanning and for the multi-disciplinary work needed to move basic research into forensic utility. The loss of this expertise would rule out the UK as a significant contributor to forensic science development, making us dependent on new technologies developed abroad. There are five consequences: (1) delay in implementing the latest technologies, (2) lack of national expertise required to evaluate and implement new methodologies, (3) lack of representation in those organisations that are actually doing the science, (4) lack of a central organisation required to standardise, validate and ensure quality control, and (5) potential loss of IP and downstream revenues.

   (c) Let me give an example from my own work on DNA, considering what would have happened to DNA fingerprinting if the FSS had not existed in 1985. While the routine and commercially profitable applications in paternity and immigration testing would have proceeded unhindered, the effects on criminal investigations would have been profound. Colleagues at the FSS collaborated with me very early on, providing casework samples and experimentation that established that DNA testing of evidence was feasible and leading to the first murder investigation. Our subsequent work in 1989 on new sensitive systems using DNA amplification was speedily taken up by the FSS, who did an outstanding job in refining these techniques to allow high-throughput automated analyses so crucial in establishing the National DNA Database, thus keeping the UK absolutely at the forefront of DNA testing worldwide. Without the FSS, forensic applications would have emerged piecemeal, and almost certainly abroad, and would have left the UK in no position to influence subsequent developments such as databasing and the international sharing of DNA information.

   (d) Closure of the FSS will also make the more complex and interdisciplinary forensic analyses impossible within the UK, since no commercial provider can give this breadth of service, nor would wish to given that such investigations are unprofitable. The implication is that complex cases either will not be investigated,
leading to potentially serious miscarriages of justice, or will have to be outsourced overseas (assuming that such outsourcing is legal and ethnically acceptable).

(e) The FSS also plays a key role in developing systems for quality assurance in the private sector. Loss of such oversight will lead to the real risk of quality deterioration, an issue of major concern given the weight of importance often attached to forensic evidence.

(f) The FSS has a major international reputation, as evidenced by two commentaries recently published in the Journal of Investigative Genetics (already sent to Xameerah Malik of the Science and Technology Committee), and plays a lead role on international committees that focus on standardization of DNA testing and databases. It also provides an important source of expertise, training and testing for countries who do not have the expertise or resources to create their own forensic science service. The UK’s reputation in all these areas would be totally destroyed with the closure of the FSS.

(g) Finally, I note that closure would leave the UK as the only major country worldwide without an impartial national forensic service.

2. What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

(a) As noted above, the range and perhaps quality of forensic evidence will diminish, some complex cases may well not be analysed and not go to trial, and there will be a major loss of forensic expertise needed to present evidence appropriately in court. If police were to establish their own in-house DNA testing facilities, then this would give them the power of arrest and sampling, the ability to test, plus potentially free access to DNA databases, all of which raises issues of impartiality.

4. What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

(a) The private sector quite rightly contributes to forensic testing in the UK. However, they will only run with tried and trusted techniques that can be adapted to routine high-volume and profitable testing. They cannot be expected to contribute to the R&D aspects of forensics and in general do not have the personnel, experience, culture and financial resources to so contribute; horizon scanning and R&D are resource-intensive activities that cannot be supported by companies working in a competitive market. Exactly the same comments apply to police laboratories, though there might be an argument in favour of police having their own DNA labs provided (1) it makes economic sense, which I doubt, (2) there is proper independent training, oversight and quality control, and (3) there is no expectation of any R&D activities.

5. What are the alternatives to winding-down the Forensic Science Service?

(a) The FSS as presently constituted is far from perfect. Part of the problem dates back to 2005 when it was privatised, profoundly shifting the ethos from service to profit-making, but there were earlier issues. In particular, the FSS has long tended to be somewhat inward-looking and isolationist rather than being fully interfaced with the academic community; this was not helped by the Birmingham location that lacked juxtaposition with Universities. Since privatisation, the situation has substantially worsened, with lack of transparency about R&D activities and a culture of IP-driven secrecy that must impede open scientific development.

(b) The FSS is however a major national repository of forensic expertise. Once closed, these experts will disappear, with many going abroad. Should the decision be made in the future to open a new national forensic service, there would be the huge issue of recruitment from a limited pool of UK expertise. Put bluntly, the closure decision is largely irreversible.

(c) So how to move forward? I would recommend retaining the FSS but in a greatly altered and substantially downsized state. I would maximise the transfer of profitable activity to the private sector, and place the remaining FSS back under the direct control of the Home Office, removing its pernicious privatised status. The focus of activities would be (1) R&D, (2) training, (3) retention of broad expertise and appropriate facilities to allow complex casework to be undertaken, (4) an oversight, quality-control and regulatory function with respect to the private sector, and (5) an international role in establishing standards and protocols. I would also like to see far better interfacing between FSS and academia, perhaps through relocation away from the Birmingham site. Finally, I would like to see a clear concordat between the Home Office and RCUK agreeing an indicative national budget for forensic R&D and with a clear understanding of which organisations would be responsible for funding, together with coherent plans for how national research priorities will be set and how funding will be allocated.
I hope these comments will be of help in assisting the Committee in its important deliberations.

Professor Sir Alec Jeffreys FRS
Department of Genetics
University of Leicester
4 February 2011

REFERENCES


Written evidence submitted by Prospect (FSS 29)

INTRODUCTION

1. Prospect is a trade union representing 122,000 professionals, managers and specialists across all sectors of the economy. We represent 50,000 professional scientists and engineers in the UK, including more than 1,000 employed by the Forensic Science Service (FSS). We have considerable concerns about the merits of the decision to wind-down the FSS and the impact that it may have on the criminal justice system and forensic science in the UK. We are also concerned about the manner in which the decision was presented by the Minister: this came as a complete shock to Prospect and our members working in the FSS and contradicted indications from the Minister’s office in July that there were no plans at that stage to make radical shifts in policy or direction for the FSS. Despite Prospect requests, there has no opportunity to meet the Minister—either before his announcement or afterwards. Over one month after the original announcement on 27 January the Minister for Crime Prevention announced a review of FSS R&D. Prospect welcomes the Government’s recognition of the need for such a review and the Minister’s acknowledgement that “Research and development in forensic science is essential to ensure the continued availability of a high quality, efficient, forensic science capability”. However, our members are understandably sceptical of the review’s intent given that a genuine review would be expected to inform a decision whereas in this case the outcome has already been announced.

2. Prospect therefore strongly welcomes this inquiry, and our responses to the questions posed by the Select Committee are set out below.

Q1. What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

3. Prospect believes that the forensic science marketplace is extremely fragile, as evidenced by the fact that private sector contractors in the current market have all struggled financially. We understand that police spending on the external forensic market has fallen. Whilst building up in-house provision may be theoretically possible for larger forces, this would not be without risks to impartiality as explained below. It would be much more difficult for smaller forces to equip themselves with all the necessary specialisms in forensic science or provide peer-to-peer reviews. Moreover, in reality the market has contracted even in advance of the budget cuts announced in the Comprehensive Spending Review. We therefore fail to see how the Government can have confidence that a sustainable market can exist in the future or how the current proposals will avoid the dangers of a supplier of this critical work failing.

4. A key test of any proposals must be to maintain the capacity needed to deal with major incidents, such as potential terrorist attacks on London, in addition to day-to-day activities. The Government’s Chief Scientific Adviser agrees that Government needs its own capability in key areas, for example for security reasons, and that it is important to identify areas that will not be supported by a fully market driven approach and may therefore require Government intervention. Professor Beddington has also indicated that “There is a need to invest in horizon scanning to identify potential future threats and opportunities that it would be in the national interest to exploit, and this may be something best led from within Government”.1

5. Although we question the motivation for the recently announced review of forensic research and development, we do strongly agree that an objective assessment is needed. The case for continuous funding has been powerfully made in the letter to The Times in December 2010 by a group of world-leading scientists2 and it is worth quoting their views “It is no exaggeration to say that the FSS has led (the advance of) forensic DNA-typing to the status of precision, sensitivity and power to individualise that it now commands worldwide. These advances paved the way for the introduction of national DNA databases to routinely match crime scene material to suspects with previous convictions..... Professional expertise cannot be maintained without continuing research and education. Scientific research always includes the risk of failure, so funding for such research cannot be generated from the income made supplying services in a competitive market”.

1 Letter to Prospect 25 January 2011
2 Times 28 December 10—Letter from Professor Morling, Professor Peter Schneider, Professor Sir Alec Jeffreys and 30 others.
6. It should also be noted that other less high-profile but nonetheless essential parts of forensic science provision are at risk. For example, Scenesafe is a business division of FSS that supplies evidence recovery kits including those used for sexual assault evidence, road traffic accidents, and all the kits used to sample under the PACE regulations. Scenesafe has been instrumental in setting the standards for quality and victim care in evidence collection and sampling processes. Its products are not used only by the FSS but sold to police forces: in fact there is a current framework agreement with the NPIA to provide DNA kits to the entire UK police force for at least another two years. This contract was won on the basis of quality and price and, with few alternative providers, there is a real danger that any that did take over the contract would be very well placed to become a monopoly supplier. Having secured this position, there would be a clear opportunity to dictate future quality and selling price.

Q2. What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

7. There are dangers both for the quality and impartiality of forensic evidence. As the authors of a recent Investigative Genetics paper note: “notable advancements in science are often remembered for the contributions they have made. In some cases, the names of inventors or developers have become icons or hallmarks of scientific disciplines … Rarely recognised, however, is the infrastructure that facilitated developments and successes”. According to Professor MacVean “Handing over forensic science responsibilities to an untested privatised system will have ‘serious repercussions’ for Britain’s next major case and is not in the best interest of its citizens”. These concerns echo those expressed by the President of the American Academy of Forensic Sciences, whose view is that “The closure of the FSS is a risky and dangerous step for the Government to make. It places profit rather than fairness and impartiality at the heart of justice, which can only bring with it the potential for serious miscarriages of justice … To take the expertise currently available to the people of the UK through the FSS and move it into an untested system is temenous at best. Any new system ‘might work’; the FSS ‘does work’.

8. These concerns are further reinforced by experience in the USA: In Washington D.C. a Bill has been brought forward that would have the exact opposite effect to the winding-up decision in the UK. The Bill would take control of Washington’s forensic laboratory away from the police and create a new government department of forensics that would report directly to the Mayor. The objective of this change is to “create higher standards, fewer errors and more reliable findings”. Politicians have taken the view that “The Metropolitan Police Department should not run the forensic lab. Police are collecting evidence, then analyse it and then testify. It’s more credible if police collect the evidence, give it to the scientist and then have the scientist testify.” There have also been allegations about the quality of forensic evidence, including complaints about missing evidence and inaccurate findings. A recent two-year study by the US National Academy of Sciences found that “Forensic analysts sometimes face pressure or incentive to alter evidence to help the prosecution”. The Chief Judge of the D.C. Court of Appeals has stated that “What we are talking about is adding a culture of science to the forensic science community. From what I have seen we have a long way to go.”

9. These are warnings that the Government should heed not least because, once dispersed, it will not be possible to simply reassemble the world-class expertise that is currently placed in the FSS. As one of Prospect’s forensic scientist members has commented, “Lack of funding will stifle research to the point of extinction and reduce the provision of services”. It is therefore of the utmost concern that Ministers appear not to have given consideration to how having the police procure and host their own services could have implications for impartiality as well as to public perception of the criminal justice system. Neither is it evident that any thought has been given to the reasons that led to the UK’s forensic science service being provided by an expert organisation independent of the police.

10. Prospect also shares expert concerns about the regulatory framework for forensic science. The Director of the Centre for Forensic Science at Strathclyde University believes that FSS’ problems prior to the Government’s announcement are attributable to being forced into an unstable and fragile market without any economic regulation or clear business plan. He comments that “The role of the current forensic science regulator is confined to standards which is necessary for high quality provision but not sufficient safeguard against the vagaries of the private market”. Currently the forensic science regulator sits in the Home Office, but as Prospect understands that there are very limited powers and no statutory influence. Prospect members are concerned that “If we allow regulation and research to be carried out by business only, there can be no faith in the results due to bias and no research without a guaranteed commercial output”.

11. It is clear that if the Government persists with its decision to wind-down the FSS, additional regulatory powers will be needed to ensure that there is a level playing field between police forces and private contractors. It will also be essential to ensure that forensic science practitioners have recognisable and respected

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3 “The demise of the United Kingdom’s Forensic Science Service: loss of world-leading engine of innovation and development in the forensic sciences” Budowle, Kayser and Sajantila—February 2011
4 Professor MacVean—Institute of Policing and Criminology and Justice, University of Cumbria
5 Dr Joseph Bono, AAFS President, January 2011
6 Councilman Phil Mendelson
7 Chief Judge Emeritus Harry T Edwards
8 “Who’s looking after British science?”—Prospect briefing October 2010
qualifications and a professional code of ethics. This will be particularly important if the intention is to encourage the competitive transfer of work between service providers.

Q3. What is the financial position of the Forensic Science Service?

12. The stated reason for the winding down the FSS is the fact that it makes a loss. This position is entirely a consequence of previous decisions to contract out an essential public service. As the signatories to The Times letter state “It would be erroneous to ascribe the current financial position of the FSS to inefficiencies. Instead this is the result of a privatisation strategy in a limited market with few customers that reduces the provision of state-of-the-art forensic science to the lowest bidder”. It is simply not appropriate for the UK’s forensic science capability to be run on the basis of pure commercial disciplines. As argued by Budowle, Kayser and Sajantila “While budget constraints do affect which services and how much of them can be provided, a cost-benefit model may jeopardise the UK Government’s responsibility to protect and secure members of its society. Consider a bank robbery in which the robber takes £8,000. The investigation, arrest and conviction of the robber could cost £50,000. On a cost-benefit basis, it would be more cost-effective for the government to give the £8,000 back to the bank instead of pursuing the robber. This scenario is hardly imaginable in real life, however, despite its economic advantage”.

13. There is a clear distinction to be made between routine analysis, which is the staple business of private forensic providers, and the full range of analysis, research and development undertaken by the FSS. As Professor Alec Jeffreys has commented in New Scientist “The logic justifying the closure remains opaque. Providing access to the best forensic expertise will always be a drain on the public purse. Government comments that the FSS is losing money reveal an unimaginative bean-counting mentality and an inability to understand how forensic science progresses”. Similarly, the President for the International Society for Forensic Genetics has argued that “It is clear that an organisation that offers world-leading research will never be able to compete with commercial suppliers that focus on the lowest cost and highest efficiency. Nor should it. There will always be a demand for customised tests, determined by the circumstances of individual cases. These are important for justice”.

14. Further, the winding-down decision pre-empt any benefits that may result from the Transformation Programme already underway. Indeed in response to a Parliamentary Question on this issue, the Minister confirmed that the £2 million monthly loss figure used did not include any savings from this programme that we believe to have been on target to deliver the savings expected of it. The FSS is currently in the process of closing sites in Chepstow, Chorley and Birmingham, with the loss of 750 staff. These are significant changes, but nonetheless do still allow the FSS to maintain a national network of offices and expertise. Prospect believes that national coverage is critically important in providing forensic scientists to crime scene visits, such as murders and fires, in a reasonable time scale. Private forensic science contractors do not have national coverage and have previously shown little appetite to provide this when the opportunity has arisen. It would neither be profitable for them nor good value for the taxpayer to require forensic scientists travel further to crime scenes, particularly in the context of decreased police funding.

Q4. What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

15. The current position of the Forensic Science Service stems from a failed experiment, dating back to 2003 when the then Home Secretary announced his intention that a commercial market should be developed, with companies competing with FSS for contracts with the police. The FSS, which had been part of the Home Office, was established as a Government-owned company (GoCo) in 2005 and told that it had to compete for business. This market experiment is unique in the world and it has not worked. Attempts to “grow the market” have failed and forensic work is now being driven by cost and not by scientific judgement. According to the Minister “The police assessment is that the external forensics market will continue to fall over the next few years”. Many private sector contractors are struggling financially or have withdrawn completely from the market. Venture capitalists have rescued one forensic company. Others are reported to be failing to meet targets and loss-making.

16. Against this background, and bearing in mind that reduced funding from the police is the reason FSS’ income has fallen, it is essential to determine what safeguards will be put in place if private suppliers opt out under constant pressure from the police to cut charges. Equally, there can be no certainty that the police can do the work cheaper in-house. Forensics is not separately costed in police accounts and budgets do not necessarily allow for overheads, eg on procurement, HR, facilities etc.

17. One response may be to fragment service provision: Police forces increasingly favour DNA analysis, partly because it is cheaper and quicker than other techniques like fibre analysis. The logical response is for private companies to focus their resources to meet this demand, whilst axing less profitable areas of forensic science. This means police are more likely to use several companies to examine evidence from the same crime, leading to a piecemeal approach. However, as Dr Bono has warned “Forensic science is the puzzle. It is a way

9 Letters, 22 January 2011
10 Niels Morling, Professor of forensic genetics and director of the department of forensic medicine, University of Copenhagen
to investigate the world around us to come up with the answers. This involves sitting down with colleagues and formulating answers to questions which relate to violations in the law and present that information reliably and accurately in court. If you split this process up then you won’t see the whole puzzle. If the FSS folds, you will lose the expertise from one place, and compromise justice for people in the UK.”

18. It would appear that there has been no risk assessment on the continuance of unprofitable but occasionally critical work or research and development and maintenance of a world-class skills base in the UK. We fail to see how the marketplace will maintain the capacity required to deal with major incidents, such as 7/7, while continuing day-to-day activities. If it is accepted that the marketplace will not provide this capability, the expectation must be that it will be maintained in-house by police forces. Yet under this approach it is not clear what the benefits would be from moving away from the current shared services model of expertise and bringing it in-house. This would lead inevitably either to duplication of provision or, more probably, to under capacity. Neither approach would deliver more cost effective or better quality outcomes for criminal justice than the FSS.

Q5. What are the alternatives to winding-down the Forensic Science Service?

19. Prospect’s view is that the organisation of forensic science in the UK should be appropriate to the requirements placed upon it. As demonstrated in this submission, the UK needs to:
   — Retain the independence of forensic science from the process of prosecution.
   — Provide forensic work to the police based not purely on commercial contracts but with the ability to allow for scientific judgement to be exercised.
   — Retain a national coverage of forensic laboratories.
   — Maintain support for R&D to ensure future quality of service.
   — Ensure common minimum standards at crime scenes and in laboratories, in line with internationally recognised standards.

Together, these requirements make a powerful case for a public sector FSS in the national interest.

20. It is not too late to change the Government’s decision and Prospect hopes that the Government will use the opportunity of the R&D review to re-think the flawed closure plan. As Professor Morling has argued “Even if the decision to close down the FSS is irrevocable, the British justice system will still need research, development, advanced investigation and a source for a competent second opinion within all fields of forensic science. This could be achieved by establishing a properly funded national centre to host research and training facilities, and a laboratory that could conduct special casework investigations, hold reference data and provide a quality assurance service for other labs”. In our view this would best be achieved by re-establishing the FSS as a public centre of excellence.

Q6. So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

21. In the period since the shock announcement of the closure little detail has emerged on how the FSS will be wound down and assets transferred to the police and the market. For instance, FSS has assisted more than 38 police forces in their reviews of historic offences (or “cold cases”) and helped to secure convictions in over 220 cases. Much of this success is based on archives held centrally by the FSS but, as yet, no information has been provided on the future of the FSS’ national and local archives, its specialist cold case scientists, or the pioneering technology on which the majority of successful case reviews depend. To give just one example, the FSS is on the cusp of introducing new DNA technology that will help improve profiles obtained from inhibited, degraded or old samples. This is not a peripheral activity: research by the BBC’s Freedom of Information team found that there are officially 1,143 unsolved killings on police records in the UK and the Association of Chief Police Officers requires all police forces to review their undetected murders every two years.

22. Compulsory contractual redundancy terms agreed in 2007 between FSS and Trade Unions are established and being used in current redundancies caused by the site closures already underway. Should work transfer to other providers, Prospect believes that two-way support for Transfer of Undertakings (Protection of Employment) Regulations (TUPE) will be required to ensure a smooth transfer of employees. This has not always been possible in the past as there is not always a perfect match between how individuals are assigned to work and how contracts pass between providers.

Prospect
10 February 2011
Written evidence submitted by LGC Forensics (FSS 63)

LGC AND LGC FORENSICS

1. LGC was founded almost 170 years ago as the Laboratory of the Government Chemist. It was privatised in 1996 and has since grown to become an international science-based company and market leader in forensic, analytical and diagnostic services and reference standards. LGC operates internationally through four divisions—LGC Forensics, LGC Standards, LGC Genomics and LGC Science & Technology. LGC is headquartered in London and employs over 1,400 staff in 28 laboratories and centres across Europe, India, China and the USA.

2. LGC Forensics has been operating in the forensic science market since 1991 and has grown to become the largest independent provider of forensic science services to police forces and other law enforcement agencies in the UK, with c.550 staff working across eight facilities. LGC Forensics is a full service provider, being approved to tender for work under each of the 14 different lot areas in the National Forensics Framework Agreement ("NFFA"), under which tenders for forensic services are made.

3. LGC Forensics’ technical capability extends across the full breadth and depth of forensic science services, from high throughput analytical tests (such as DNA profiling and drug identifications), to complex casework involving hundreds of exhibits, to specialisms such as ballistics and digital and document forensics.

   — In the high throughput market, LGC Forensics has made significant investments in a fully automated PACE DNA (DNA from mouth swabs) platform as well as an automated platform for DNA extraction for crime scene samples. In both cases, these investments have increased capacity and reduced the cost and time of analysis to the customer. For example, in PACE DNA, the market has seen price reductions of in excess of 35% over the past two years.

   — In casework, LGC Forensics has played a pivotal role in a wide range of high profile re-investigations, including Rachel Nickell, Princess Diana and Damilola Taylor.

   — The breadth of LGC Forensics’ offering has enabled us to support even niche areas of expertise in forensic science, while other parts of LGC Group also provide additional support to our forensics work. For example, our audio-visual team provided key evidence in the Rhys Jones case and, working with our Science and Technology Division, we contributed to the Alexander Litvinenko polonium poisoning case.

4. LGC Forensics has a wide breadth of customers: we have worked with every police force in the UK as well as UK Government agencies including MoD, DWP and HMRC, while internationally we have worked with a range of overseas governments and law enforcement agencies. LGC Forensics currently has c 20% of the external police forensics market in England and Wales.

5. LGC Forensics’ track record demonstrates an unparalleled breadth and depth of scientific capability in forensic science, combined with a commitment to meet the exacting technical and commercial demands of our customers. We are proud to be a key partner to the UK Criminal Justice System ("CJS"), providing trusted services with recognised expertise and professionalism, helping to maintain the UK’s worldwide pre-eminence in forensic science.

6. The forensic science market is only one of a number of areas where LGC provides scientific support to the UK Government. Through our Science & Technology Division, for example, we are the UK’s designated National Measurement Institute for chemical and biochemical analysis, the National Reference Laboratory for a range of key areas, and also the host organisation for the UK’s Government Chemist function. The capabilities of the LGC Group provide a rich source of innovation for forensic science, including the core technology behind our RapiDNA development (covered in more detail in paragraph 15 below).

7. We are answering questions 1, 2, 4 and 5. We are not in a position to answer questions 3 and 6.

What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

8. The closure of the FSS will not damage the prospects for forensic science in the UK so long as its wind-down is properly implemented and is used by the Government as an opportunity to support a properly regulated market of a sufficient size to enable competition between dedicated market participants, as well as to support investments in efficiency and innovation.

9. Over the past decade, successive policy developments have led to the opening up of the UK forensic science market to independent providers, culminating in the North West, South West and Wales ("NWSWW") pilot tender in 2007–08 and the NFFA which was established shortly thereafter. The clear policy direction and market framework which emerged through this period was a critical precondition for LGC Forensics and other independent providers to invest in developing competing operations to the FSS.

10. The emergence of competitors to the FSS has delivered a wide range of benefits, including:
— significant cost savings to police forces. The December 2009 Home Office paper Protecting the Public: Supporting the Police to Succeed made the following comments about the NFFA: “Early indications are that forces save 10% on DNA services and around 12–15% on drugs services. The total forecast benefit from 2008–09 to 2012–13 is over £15 million, with some £4 million from reducing transaction costs and some £11 million on cost reduction eg through better pricing.”;
— significant acceleration of detection rates through reductions in turnaround times (from several weeks to a few days) and the emergence of a standardised performance framework around turnaround times; and
— the regularisation of work types, facilitating consistency of service and competitive benchmarking of providers against each other (eg on DNA success rates, which measure the ability of competing providers to extract a DNA profile from a sample type).

Protecting the Public concludes that “The NFFA...has reformed the way in which...[forensic analysis] services are procured. It is improving the Service and saving money.”

11. The benefits of a competitive market are best illustrated by a comparison with other countries which persist with failing public sector monopoly provision. These include Germany and the USA, both of which have mounting backlogs of thousands of unsolved cases, long turnaround times of more than 6 weeks and escalating costs.

12. Given the benefits cited above, it is imperative that the closure of the FSS is not allowed to interrupt the virtuous circle of clear policy direction, leading to increased private sector investment, leading to improved outcomes for the UK CJS.

13. If this danger is to be avoided, it is critical to ensure that the wind-down of the FSS leaves a market which is of a sufficient size to both attract continued private sector investment and to support a number of significant market participants. Against this backdrop, the Minister’s recent confirmation of ACPO and HMIC advice that the external market will contract from £170 million to £110 million by 201511 gives cause for concern.

14. We note that the external market currently only represents a small proportion of the wider UK forensic science market—extending from recovery of evidence from the scene of a crime to the presentation of evidence in court—which is estimated to be worth c.£340 million to £360 million in England and Wales. Opening up this wider market to competition would be a positive step towards incentivising continued private sector investment in the market. Moreover, we believe that such a step would deliver significant savings to police forces, through introducing more efficient working practices.

15. Critical ongoing investment into research and development will also be safeguarded if the market is of a sufficient size. In the current financial year, LGC Forensics is investing c 10% of turnover on research and development to ensure that we are at the very forefront of innovation in forensic science. This includes the development of RapiDNA—a revolutionary system for DNA profiling at a crime scene. This innovation will reduce the time taken to identify suspects from three days to less than an hour, which will have a dramatic effect not only on the speed, but also the cost of crime detection. The development of RapiDNA represents a multi-million pound investment for LGC Forensics.

16. We value the contribution of the academic sector to research and development in forensic science and, indeed, we work closely with a number of universities and institutes. However this cannot replace the value derived from our knowledge of practical applications and the challenges of applying this research in the field.

17. It is also critical to ensure that all market participants—in both the public and private sectors—are competing on a level playing field. It will be difficult to attract further private sector investment in the market while there remains a perceived risk that one state subsidised market participant (the FSS) is being replaced by another (in the shape of in-sourced provision from police forces) and while there continues to be a discrepancy in the quality standards which apply to independent providers and public sector providers. Further information on this is provided below.

18. It is important that the transfer of work from the FSS utilises the spare capacity available in the private sector, in order to avoid unnecessary over-capacity and therefore, cost in the market.

What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

19. We believe that, assuming the process is handled properly, the closure of the FSS will not affect the quality of forensic science support to the UK CJS.

20. The private sector already has the expertise, the experience and the intellectual capital to take on the work of the FSS. Indeed, recent forensic science contract awards have been made based on a thorough evaluation of the technical and commercial capability of competing providers. It is only through competing with the FSS on both technical and commercial grounds that independent providers have been able to win work. For example, when all providers were scored on their technical and commercial capabilities during the setting up of the

11 Hansard, 1 February 2011, Col. 689W
NFFA, LGC Forensics achieved the highest total score in the technical category. This clearly illustrates that there is no quality compromise involved in transferring work from the FSS to other private sector providers.

21. Each of LGC Forensics’ laboratories is accredited to the quality standard ISO 9001 and the laboratory standard ISO 17025 for forensic science (the latter involves not only the accreditation of the laboratories, but the individual methods used in them). In total, LGC Forensics has ISO 17025 accreditation for 87 methods across 6 laboratories covering the full range of forensic disciplines. This extensive scope of accreditation is amongst the broadest in the world.

22. However, in order to ensure that the closure of the FSS does not impact the quality of forensic evidence used in the criminal justice system, it is critically important to have a level playing field with respect to quality standards. Specifically:

   — All forensic science service providers (police forces or independent providers) should be required to conform to ISO17025 immediately, rather than by 2015, as currently proposed by the Forensic Science Regulator.

   — Likewise, any services or contracts currently undertaken by the FSS should only move to providers who have already met ISO 17025. In order to maintain the integrity of the industry during and immediately after the closure of the FSS, it is essential that there is no transfer of work from accredited to non-accredited environments.

23. In order to enforce adherence to the above, we believe that the role of the Forensic Science Regulator should be supported and strengthened in order that he can ensure adherence to quality standards and impartiality.

24. As to impartiality, Robert McFarland (who led an independent review of the Forensic Science Service for the Home Office in 2002–03) has observed that one potential outcome of the FSS’ wind-down is that the police undertake more forensic work “in-house”. “One has to question whether it is right that the police are the sole arbiters of what scene of crime samples are sent for analysis and what discarded” Mr McFarland has written.12 Noting that police forensic experts could appear in court as expert witnesses, he questions how this sits with the criminal procedure rules laid down following the review by Lord Justice Auld in 2001, which specify that the expert’s duty to the court overrides “any obligation to the person…by whom he is paid”. Mr McFarland notes that “it is stretching credulity that this could remain meaningful if the expert owes his career to a police service which, in an adversarial court system, is intent on securing a conviction.” We believe that Mr McFarland’s concerns merit close attention.

25. We also note that there has been considerable debate over the impartiality of forensic science in the United States, where most forensic work is currently performed in police laboratories. One authoritative study, commissioned by the National Academy of Sciences in 2009, recommended as follows, “The entity that is established to govern the forensic science community cannot be principally beholden to law enforcement. The potential for conflicts of interest between the needs of law enforcement and the broader needs of forensic science are too great.”13

26. The Justice Project, also in the USA, was a response to a number of errors made in forensic science services in high profile cases. Among its conclusions, it recommended “independent transparent oversight” to enforce quality in forensics; a requirement to develop internal structures and policies to prevent bias in testing and analysis; and ensuring that all forensic laboratories are independent from law enforcement and prosecutorial agencies.14

What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

27. The state of the forensics market in the UK is healthy in terms of the capacity and technical and commercial capability of external forensic science providers. Moreover, until recently, the NFFA gave independent providers significant visibility over the future evolution of the marketplace, enabling them to plan for the long term.

28. However, in the recent past, the external market has been characterised by a significant (c 20%) reduction in submissions, as police forces have responded to spending constraints by reducing external spend and in-sourcing work, often to unaccredited environments.

29. This reduction in submissions has had the effect of:

   — catalysing a sharp contraction in the size of the external market, which now has significant over-capacity (i.e. excess supply over demand);

   — reducing external providers’ profitability (and exacerbating the FSS’ operating losses); and

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12 http://www.guardianpublic.co.uk/better-impartiality-needed-in-forensic-services
13 Strengthening Forensic Science in the United States: A Path Forward, 2009
— undermining independent providers’ confidence in the current regulation (quality standards, level playing field) and future evolution (market size etc.) of the external market. This could lead to reluctance to invest in additional capacity and innovation.

30. One consequence of the recent reduction in police submissions is that there is currently significant excess capacity amongst external providers which is available to absorb work from the FSS.

31. LGC Forensics is carrying significant excess capacity across most of its service lines and particularly in the DNA and casework areas which together represent >70% of the external market.

32. It is worth noting that LGC Forensics and other independent providers have been working under the assumption that the NFFA would drive tenders from 29 police forces over the next two years. Consequently, we were already planning for a significant ramp-up in our activities prior to the 14 December Home Office announcement in relation to the closure of the FSS. For example, we not only increased our laboratory space in anticipation of growth through those tenders, but have also invested £3M in a laboratory information management system to handle the increase in forensic data and to drive efficiency across our laboratories.

33. LGC Forensics has considerable experience of responding rapidly to increased customer demand. For example, after the award of the NWSWW tender in 2008, LGC Forensics invested in new scientific equipment and recruited nearly 100 new scientific staff, doubling our casework capacity within six months. We are both willing and able to do the same again if required.

What are the alternatives to winding-down the Forensic Science Service?

34. LGC believes that the only alternative to winding down the FSS is to continue with the status quo, where FSS losses will continue to accelerate as it loses market share to independent providers. Given public funding constraints, we agree with the Government that it is not tenable for the FSS to continue to record significant operating losses when there are successful independent providers which offer the same range of services, under an accredited quality framework, at lower cost and without public subsidy.

35. There may be a temptation for police forces or regions to take over parts of FSS operations and sites, in order to assure local continuity and to attempt to reduce costs. In our opinion, this would not only fail to reduce costs, but would seriously threaten the viability of the market as a whole and therefore national provision.

Steve Allen
Managing Director
LGC Forensics
14 February 2011

Written evidence submitted by Cellmark Forensic Services (FSS 73)

Declaration of Interest

Cellmark Forensic Services (Orchid Cellmark Ltd) is a private forensic company currently working under contract with over 50% of the police forces in England and Wales. Cellmark provides forensic analytical services equivalent to those delivered by the Forensic Science Service from the provision of forensic scientists to support the police at crime scenes, to the delivery of a wide range of laboratory services. Our services range from specialist DNA testing to the provision of a comprehensive range of forensic techniques used in the investigation of serious offences (forensic casework). Cellmark employs approximately 350 people, primarily involved in forensic analysis, at our facilities in Abingdon, Oxfordshire and Chorley, Lancashire. Established in 1987 Cellmark has over two decades of experience of providing high quality forensic testing in the UK, accredited to international quality standards.

1. What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

The impact of the closure of the Forensic Science Service should be considered with regard to the short, medium and long term.

In the short term the main issues will be capacity. There is already a well developed forensic marketplace in England and Wales with a number of suppliers providing forensic services to meet clearly proscribed forensic requirements, to agreed and defined quality standards. Capacity already exists, or can be quickly developed, for a number of the services provided by the FSS (such as PACE DNA and crime scene DNA) while for other areas of forensic science, particularly those that are more labour dependant, capacity growth within private suppliers will need to be accelerated to replace the FSS and match police requirements. How and where forensic science is delivered has of course been changing in recent years with for example the involvement of the police in some aspects of the service delivery previously carried out by the FSS, the development of NABIS, and the transitioning of database functions to NPIA. Certainly this period will be challenging, but there is no reason why "forensic science" should suffer if the wind-down is appropriately managed, particularly
if the skills of those already within forensic science can be retained. Initial capacity constraints are likely to impact on the speed of service delivery in the short term, rather than on quality.

In the medium term it can be expected that the FSS capacity will be absorbed as the private market expands to meet police requirements. Police are likely to see efficiency and therefore pricing benefits as well as benefits in the speed of service delivery. What will have a significant impact on forensic science will be police expenditure in this area. If public sector cuts are disproportionately focused on external police spend, then the willingness of the private sector to invest and develop capacity may be limited. The private sector cannot be expected to invest in the replacement of the FSS capacity with high quality services, if it sees a limited long term future for this investment (should for example the police wish to develop their own equivalent services). What is not well documented or understood is the true value of forensic science in the investigative value chain. Understanding how forensic science can deliver cost savings elsewhere in the criminal justice process would help with expenditure decisions.

In the long term the development of forensic science will benefit from Government support, but need not suffer because of the absence of the FSS. We understand that the FSS was fortunate to receive a significant budget for R&D from HM Government in past years. Clearly this ring-fenced a degree of spending into the area of forensic science which should be encouraged for the future, and aligned with the requirements of the various customers of the criminal justice system. The private sector is quite capable of driving forensic innovation and indeed many of the analytical technology developments that forensic science has historically benefitted from have been made by the private sector, often for other, much larger market opportunities. The development of DNA profiling and the National DNA Database for example resulted largely from core technologies invented outside of the FSS (DNA fingerprinting, PCR, STR markers, automated genetic analysis, use of fluorescent markers). The private sector will continue to invest in service development to remain competitive. However the allocation of government funding to develop and transition technologies for forensic application should be encouraged, particularly when police expectation of forensic pricing is downwards.

Aside from issues already considered, we would also like to raise our concerns about the comments of some Members of Parliament in recent years regarding private forensic companies. No doubt anxious to protect their constituents in the public sector, some descriptions of private forensic companies, their motivations and abilities, have been mis-informed. We are concerned that this could lead to diminished public confidence in forensic science which would be to the detriment of the criminal justice system.

2. What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

We firmly believe that the closure of the FSS will not have any impact on the impartiality of forensic evidence, nor will it have any negative impact on its quality.

Forensic scientists in the private sector have exactly the same motivation to support the criminal justice system and the victims of crime as those in the public sector (it is worth remembering that although the origins of the FSS were in the public sector it has, since 2005, effectively been a private company, albeit owned by the Government). The majority of the experienced reporting forensic scientists in the private sector worked at some time within the FSS. Their ethics, and impartiality are independent of the organisation for whom they work and ultimately, when they stand in the witness box to provide evidence they are representing themselves rather then the company that employs them.

With regard to quality, all forensic work, when tendered through the NFFA, requires compliance with the pre-determined quality and accreditation standards, documented on each product specification document. In general the requirement is for forensic services to be delivered within ISO 17025 accreditation, which is in line with the Forensic Regulator’s Codes of Practice.

It is perhaps interesting to consider that reducing police budgets are more likely to have a greater impact on the delivery of forensic science than the choice of accredited forensic provider.

3. What is the financial position of the Forensic Science Service?

We have no other information other than that publically available from Companies House (Annual Accounts).

4. What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

We have already given our input into the recent PwC report which analysed the state of the forensics market in the UK in detail and have received a redacted copy of this report from NPIA. We also note the written response to Parliamentary Questions given by James Brokenshire on 1 February 2011 “The police assessment is that the external forensics market will continue to fall over the next few years, as forces seek to maximise efficiencies in this area. This advice, based on the advice from the Association of Chief Police Officers (ACPO), Her Majesty’s Inspectorate of Constabulary (HMIC) and others, suggests that this market will reduce from £170 million in 2009 towards around £110 million by 2015.”
We are firmly of the opinion that the private sector has the capability to carry out the work currently performed by the FSS and as one of the NFFA suppliers we have been involved with discussions with the Operation Slingshot team with respect to the capacity requirements for different services. It is certainly the case that capacity for some analytical services is more straightforward to provide than others, but given an adequate transition process and realistic timeline this work can all be carried out as well as or indeed with better service levels than the FSS.

5. What are the alternatives to winding-down the Forensic Science Service?
   
   We are not in a position to comment on this.

6. So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?
   
   We are lacking some of the detail of the exact capacity requirements, mechanism for transferring work under procurement contracts and timeframes. The issue of TUPE does give some cause for concern as it has the potential to impact on the commercial viability of the transfer of certain areas of work from the FSS to private companies. As far as we are aware, the FSS asset register has yet to be published.

   David Hartshorne, Commercial Director
   Roger Derbyshire, Operations Director
   Cellmark Forensic Services
   14 February 2011

Written evidence submitted by the Forensic Science Regulator (FSS 76)

What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

Background

1. The post of Forensic Science Regulator was created in February 2008 when I was appointed through the public appointments process to:
   — Establish and monitor compliance with quality standards in the provision of forensic science services to the police service and the wider criminal justice system.
   — Ensure the accreditation of those supplying forensic science services to the police, including in-house police services and forensic suppliers to the wider criminal justice system.
   — Set and monitor compliance with quality standards applying to national forensic science intelligence databases, beginning with the National DNA Database (NDNAD)\(^\text{15}\) and the National Ballistics Intelligence Service and extending to others as they arise\(^\text{15}\).
   — Provide advice to Ministers, criminal justice system organisations, suppliers and others as seems appropriate, on matters related to quality standards in forensic.

2. Prior to this quality standards were managed through an ad hoc mix of accreditation against an international laboratory standard (ISO/IEC 17025) for the government and commercial laboratories, registration of some forensic science practitioners with the Council for the Registration of Forensic Practitioners (CRFP), and use of certification against the ISO 9001 quality management standard for police use of fingerprint methods. None of these processes were coordinated or worked to any overarching strategy.

3. Quality standards for forensic pathology were established in 2004 in Home Office and Royal College of Pathologists published standards.

4. I am now recommending a new and coherent quality standards framework based on accreditation for all laboratory functions. In July 2010 I published for consultation Codes of Practice and Conduct, the final Codes are expected to be published in February 2011.

Accreditation

5. Accreditation of the non-police laboratories through assessment by the United Kingdom Accreditation Service (UKAS) against ISO/IEC 17025 started in 1995, led by the Forensic Science Service which was then the monopoly supplier of forensic science laboratory services to the police. All the main laboratories are now accredited with some small laboratories that have recently joined the police procurement framework seeking accreditation and some independent digital (computer and telephone) forensics laboratories now accredited or seeking accreditation.

\(^{15}\) The National DNA Database is a registered trademark owned by the Secretary of State for the Home Department
6. The Metropolitan Police Service achieved accreditation earlier this year for an in-house trace evidence recovery laboratory and plan to get all their in-house laboratory functions accredited within the next three years. Derbyshire Police are working through the final stages of accreditation and the police National Ballistic Intelligence Service laboratories in West Midlands Police and Greater Manchester Police are in the final assessment stages. The roll out of accreditation to other police force laboratories is subject to planning and oversight by the Forensics 21 Programme Board and coordinated by the NPIA.

7. I have written a series of letters to the NPIA and ACPO leads on forensic science since September 2009 setting out a requirement for the police in-house laboratories to work to the same standards as the commercial laboratories. This has resulted in some helpful exploratory work by the NPIA and plans for the coordinated roll out of accreditation across all police forces. The NPIA are also working on harmonising methods and assisting with the development of standard operating procedures.

8. In November 2009 the EU Council agreed a Framework Decision requiring all DNA and fingerprint laboratories (whether they be government, commercial or police laboratories) to be accredited against the ISO/IEC 17025 standard by 2013 and 2105 respectively. All the UK laboratories undertaking forensic DNA analysis for the police currently comply with this accreditation requirement. The initial focus for police forces is on their fingerprint enhancement laboratories in order to achieve compliance with the Framework Decision, some forces already wish to include wider laboratory functions; detailed guidance for police laboratories is in draft form and will be agreed between me and the NPIA within the next four weeks.

9. Assessment of an organisation against ISO/IEC 17025 is undertaken by UKAS to provide an independent, objective and detailed assessment covering a broad range of issues including: evidence of organisational competence in terms of quality management (the management system requirements in ISO/IEC 17025 meet the principles of ISO 9001:2000 Quality Management Systems—Requirements and are aligned with its pertinent requirements), evidence of the competence of all the individual practitioners employed by the organisation (achieved through examination of training records, interviews with staff and observations of staff at work in the laboratories), and evidence that the methods used in the laboratory are properly validated and are being used appropriately.

10. An important and fourth aspect of accreditation is a requirement to see evidence that a laboratory’s work and results are free from undue influence or pressure from customers or other interested parties, also that laboratories working within larger organisations where influence could be applied (such as police laboratories), are free from such influence and are producing objective and valid results.

11. Evidence of impartiality and validity of results sit alongside evidence of organisational competence, individual practitioner competence and validity of methods as the cornerstones of my forensic science quality standards framework, which for the laboratories is underpinned by ongoing (annual) independent assessments by UKAS.

12. The Forensic Science Service is accredited by UKAS across the broad range of services it supplies to the police and other users of forensic science. There is a risk to quality and impartiality if that work is moved from an accredited quality focused environment to one lacking such standards. I have written to the police lead on the transition of work and to the Home Office FSS Transition Board (of which I am a member) pointing out these risks and making it clear that packages of work should only be moved following an assessment of risks to quality and impartiality in each case. It is an unacceptable risk to move work to a non-accredited environment, but with varying and possibly manageable levels of risk if work is taken on by an accredited laboratory but possibly without some items of work within its scope of accreditation. However, there will have to be an agreed action plan to achieve the required extension of scope to bring the work within the accreditation for that laboratory.

Council for the Registration of Forensic Practitioners (CRFP)

13. Practitioner registration was accepted by the government in 1998 as a method of regulation with practitioners across the board (crime scene investigators, scientists, forensic medical experts and others) offered a voluntary competence based registration scheme. CRFP was initially funded by the Home Office and expected to achieve self funding by registering some 10,000 practitioners. By 2004 CRFP had registered 1,800 practitioners and sought further government support, which was agreed but set to finish in 2010.

14. By March 2008 CRFP had registered 3,000 practitioners and approached me for support to require registration across the board. They also wrote to the Home Office seeking funding beyond 2010. Meg Hillier MP (then Parliamentary Under Secretary of State at the Home Department) referred the request to me for a review of practitioner registration which I published in March 2009. I recommended that accreditation, in most circumstances, provided a far better standards framework. The net result was that ACPO support for CRFP was withdrawn along with the annual police subscriptions of £350,000; CRFP ceased trading in March 2009 (having been established as a company limited by guarantee). Government funding for CRFP had by then transferred to the NPIA which took the decision to remove all further grant-in-aid.

15. Historically, criticism of forensic science quality failings focused on individual practitioners. This focus, and the registration process, failed to regulate accountability for quality at the organisational level.
16. In early 2008 the Office for Criminal Justice Reform considered problems in the criminal justice system with expert witnesses. The result was recommendations, agreed by Ministers, that a solution was not a register. The matter was referred to the Law Commission which has published a consultation paper and is close to publishing a final report and draft legislation on the admissibility of expert evidence.

Fingerprints

17. In 1995 ACPO took the decision to establish a quality management framework for fingerprint methods based on certification against ISO 9001 and mandated a single approach across all police forces. The EU Council Framework Decision in November 2009 requires that the fingerprint enhancement laboratories become accredited under ISO 17025. I am using this and the expected publication later this year of the Scottish Fingerprint Inquiry as the catalysts for changes to the quality standards framework for all fingerprints methods. I have a group of experts advising on this and expect to recommend an accreditation based standards framework.

18. The Scottish Fingerprint Inquiry report and recommendations will be the result of a detailed and independent review of fingerprint methods, the results of which will have global implications for the quality standards that should underpin the use of fingerprint evidence. I gave evidence to the Inquiry.

Forensic Pathology

19. Forensic pathology standards were published as a code of practice by the Home Office and Royal College of Pathologists in 2004; forensic post mortems are expected to be conducted by a pathologist on the Home Office Register of forensic pathologists, who comply with the code.

20. The code has recently been updated through a specialist group set up by me. Alongside this, new forensic mortuary standards have been drafted; both are soon to be published and will be agreed with the Royal College of Pathologists.

Codes of Practice and Conduct

21. The Codes of Practice and Conduct for Forensic Science Providers and Practitioners in the Criminal Justice System were published by me for consultation at the end of July 2010. They are the result of considerable stakeholder consultation and involvement, and form the basis of a new quality standards framework bringing all regulation and guidance into a single document, with a single compliance mechanism through accreditation, initially for the laboratory services but with work in hand to test new accreditation standards for crime scene investigations.

22. Coordination is also ongoing with specialist areas of forensic science, such as forensic archaeology, to produce new standards and guidance, where possible in collaboration with professional bodies such as the Institute for Archaeology.

Legislation

23. Discussions at the Forensic Science Advisory Council have led to agreements that compliance with the Codes should be based on a mandatory but non-statutory requirement enforced through police contracts, agreements with ACPO and gate keeping functions by the Crown Prosecution Service.

24. It is a common and often repeated assertion that compliance with the Codes should become a statutory requirement, to do so has not been necessary to date but is kept under review to be referred to Ministers should it become so.

25. Work to adopt the Codes will carry on in the absence of any underpinning legislation.

International collaboration

26. Modern forensic science methods are global in nature and more and more so are a result of collaborative work between laboratories and universities around the world. This is particularly relevant across Europe with the recent introduction of European regulations for some forensic science laboratories.

27. Across Europe, forensic science quality standards are of principal interest to the European Network of Forensic Science Institutes (ENFSI). I have had meetings with the ENFSI Board and agreed to develop a joint strategy. Progress on the joint agreement has become delayed but in the meantime my staff attend regular ENFSI meetings, not as full voting members but welcomed as guests at any meetings we wish to attend.

28. I am an invited guest at the European DNA Profiling Group (EDNAP) meetings and the international society of forensic genetics (ISFG) meetings, which my lead DNA expert always attends

29. The accreditation model I have developed is not dissimilar to that already employed for forensic science at Australian federal and state levels, and interestingly is also similar to that proposed in a new Bill in the US Congress to ensure consistency and scientific validity in forensic testing. The US Bill sets some interesting requirements for coordinated research strategies.
30. I have had several productive meetings with my counterpart in Australia, Mr Alastair Ross at the National Institute for Forensic Science. We have signed an agreement to collaborate when and where we can on developing quality standards and on influencing research. Mr Ross and I are planning a meeting in April this year with the US National Institute of Justice to explore opportunities for further international collaboration. Finally, I have had meetings with the Director of the US Federal Bureau of Investigation forensic science laboratory, Dr Chris Hassell. Dr Hassell and I are to meet again in March to also discuss collaboration on developing standards.

Research

31. I am delighted to be able to support Professor Bernard Silverman in his review of research and development in forensic science. Current research and development in this field goes far beyond that provided by the Forensic Science Service.

Andrew Rennison
Forensic Science Regulator
14 February 2011

Written evidence submitted by the Forensic Science Service (FSS 87)

Declaration of Interest

This submission has been written by the Forensic Science Service and has the approval of the Chairman and Chief Executive Officer.

Summary

1. FSS was engaged in a major transformation process to reduce costs and improve operational performance when its closure through an orderly wind down was announced in December 2010. Unfortunately the collapse in police demand for forensic services seen this year, and forecast to continue in future, jeopardised completion of the transformation and the prospect for a sustainable financial position going forward. The announced closure of FSS has been a huge shock and disappointment to staff; and to the forensic science community in the UK and overseas.

2. This decision potentially puts at risk:
   - International scientific leadership and innovation, based upon the breadth and depth of forensic science skills in the UK.
   - Capacity and capability to respond to major incidents.
   - Capability to conduct cold case reviews.

3. The consequent likelihood of fragmentation of analysis between Police and Forensic Service Providers (FSPs) risks a decline in:
   - Effective use of forensic science in the courts, through loss of context in the development of forensic strategy, analysis and interpretation of results in complex cases.
   - Quality of the forensic science delivered to the Criminal Justice System (CPS).
   - Public confidence in impartiality.

4. We believe that the need to secure an effective future for UK forensic science is now more critical than ever and requires the following:
   - A clearly articulated Policy for the provision of forensic science including a view on market development and its stability.
   - An appropriately resourced, centrally sponsored focus upon research and development, training, specialist casework, reference data collections, cold case reviews.
   - Tougher regulation with universal application of quality standards.
   - A sustainable mechanism to encourage and exploit innovation.

5. We are dedicated to ensuring that the wind down of FSS addresses, in collaboration with the Home Office and Police, the above requirements and secures the retention of our skilled resources and knowledge base in support of the Criminal Justice System.

Market Size and Development

6. The external forensic market (outside Police Forces) has been forecast to fall from £170 million in 2009–10 towards £110 million by 201516 (although some estimates are lower), due to a combination of decreased demand and increased police in-sourcing. FSS share of this market in 2009 was c 65%. Despite

16 Response by Rt Hon James Brokenshire response to Diane Johnson, Hansard (citation: HC Deb, 1 February 2011, c689W).
general over capacity in the market, some FSS capacity will need to be transferred to existing and possibly new providers. However, in a shrinking market, investment in expansion constitutes a significant risk to these providers, given that the current market outlook is weakening and unstable.

7. A robust analysis of the benefits and drawbacks of fragmenting forensic science provision between individual police forces and FSPs is required, on which to base policy for forensic science market development.

**FSS Financial Position**

8. FSS reported an operating loss of £12.7 million on £113.0 million of revenue in 2009. Prior to the closure announcement, the business was in the final stages of transformation, involving closure of sites and introduction of more efficient working methods built on industry leading technology. This programme, funded with a £50 million government grant, was on track to deliver the anticipated benefits by mid 2011.

9. The losses of £2 million per month quoted in the December 14th announcement do not reflect the prospective savings from the transformation programme. The first FSS site closed at the end of December 2010, as planned, with two further sites on track for closure in March 2011 in anticipation that FSS would lose market share as the commercial market developed. In fact, delays in police procurement processes meant that progress towards a smaller market share has been slower and less than originally expected.

10. The overall cost of closure will depend on which FSS activities and people can be transferred or sold. FSS is not sighted on the final estimates used in reaching the closure decision. The major driver will be the extent to which FSS staff are redeployed by competitors/police forces as the transition develops. This in turn depends on development of the commercial market and the actions of police customers through the process.

11. Our assessment of publicly available financial information for other FSPs indicates that, prior to recent reductions in demand, only one provider was reasonably profitable. It is likely that, in the current market, none are achieving sustainable returns.

**Scientific Leadership and Innovation**

12. FSS is an internationally recognised leader in Forensic Science; it established the world’s first National DNA Database (NDNAD). Over the last five years, FSS has published around three times as many peer-reviewed scientific papers as the other FSPs in England and Wales combined. The closure announcement drew strong condemnation from scientists worldwide.

13. In recent years since the change of status to a GovCo, the challenge has been to maintain UK leadership in Forensic Science while achieving commercial viability. FSS has made recent substantial progress including achieving approximately 30% efficiency improvements in its internal operations. It has recently won a contract to set up a DNA Database and sample processing capability in the United Arab Emirates and was commercialising its Rapid DNA system, allowing the police to match suspects to crimes in the police station before they are released from custody. The Judge Business School estimates that Rapid DNA could save UK police over £40 million every year.

14. Since the closure announcement, FSS has received a number of expressions of interest from companies around the world in its patented technologies. Dismantling the FSS will be an irreversible backwards step in meeting the challenge of balancing scientific leadership with commercial viability.

15. FSS’ world-leading status is built on close working partnership between forensic researchers and operational practitioners, so that new methods address real needs and are implemented effectively. This infrastructure is recognised by Budowle et al 2011,18 “Notable advancements in science are often remembered for the contributions they have made...Rarely recognised, however, is the infrastructure that facilitated developments and successes.”

16. Separating research from practice introduces delay and loss of focus. For example, innovation in the NDNAD has slowed since custodianhip moved to NPIA.20 The UK now trails behind European counterparts in adoption of improved DNA analysis chemistries and may fail to meet its obligations on exchange of DNA data between EU member states.21 This is despite FSS’ leading role in the design and testing of new chemistries; and pressure from UK FSPs for their adoption.

17. Research is aimed at reductions in policing costs and increase in effective outcomes. For instance, FSS advanced DNA database search algorithms enable matches in DNA results that were previously discarded due to their complexity. The NDNAD 2007–09 report indicates that 36,727 matches were generated between crime

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19 FSS sponsored project with the Judge Business School, Cambridge University.
20 National Police Improvement Agency.
21 The treaty of Prüm was converted into EU-legislation by two Council Decisions (2008/615/JHA and 2008/616/JHA) and requires that all 27 EU-countries must have implemented the council decisions re data exchange by 26 August 2011. To facilitate the comparison of DNA data (i.e. reduce the number of false positive matches), the European Standard Set (ESS) of areas of DNA tested was increased to include 12 short tandem repeat (STR) regions. The specification was written in Council Resolution 2009/C 296/01 was adopted on 30 November 2009 and is to be implemented by member states no later than 30 November 2011.
sciences and individuals in a year. If FSS technology were adopted, preliminary studies showed that 44,000 matches (some 20% more) could potentially have been made. Not all DNA matches lead to conviction but this technology has the clear potential to generate intelligence from samples which have been processed and paid for, but which are currently discarded.

18. Further database innovation will be required to enable effective removal of personal data following the S. & Marper17,22 ruling. FSS has designed a unique DNA database concept, which centralises data storage, minimises the requirement for FSPs to store DNA data and gives greater control in storage, management and audit of DNA information.

19. The European Security Research and Innovation Forum (ESRIF) has developed a vision to improve future security in Europe: “The effective application of forensic science depends on the logically correct reasoning (based on empirical data and statistics), integrating the different phases in the forensic process … This must occur within a comprehensive accreditation framework.”23

20. FSS is using its unique blend of skills to pioneer methods to meet this challenge. A new system for reporting large volumes of data previously handled in paper reports has been implemented; it presents data in a clear, interactive, pictorial format that can be displayed on any computer. This speeds up investigations, by allowing investigators to easily interpret and share information.24 Extending these methods would improve intelligence by looking for complex links across multiple evidence types. In the court environment, it would assist in simplifying presentation of relationships between multiple items of evidence, examinations, scenes and individuals. FSS is the only organisation with the infrastructure, domain knowledge and relevant data collections to further develop these tools. Loss of this knowledge and infrastructure is at risk with the closure of the company.

21. Even before the closure of the FSS was announced, the increasing difficulty of introducing innovation in forensic science to the UK criminal justice system (CJS) had become apparent, with no clear policy or transparent process for FSPs to follow in order to get innovation launched.

QUALITY OF SCIENCE

22. Forensic Science is highly context specific. Fragmentation of the supply chain from crime scene to court room, with police and FSPs analysing sections of cases impairs the holistic evaluation of evidence in context. For example, in several instances we have encountered submission to FSS of swabs taken by police from weapons, rather than submission of the weapons themselves. This has led to scientists being unable to comment on how blood may have been deposited on the items and hence its significance.

23. Fingerprint analysis has helped to solve many crimes. However, fingerprint evidence is presented in court as categorical opinion based on a subjective process. Evidence has recently been challenged in courts and by the National Academy of Sciences (NAS) in the United States (US).25 Criticisms include lack of transparency and reproducibility in the process; lack of scientific foundation; potential for weight of evidence to be over or under stated; lack of measured error rates. NAS noted the “dearth of peer-reviewed, published studies establishing the scientific bases and validity of many forensic methods”. Criticisms have been compounded by high profile failures of current fingerprint practice.26 As a result, a growing movement is calling for a mathematically robust model, with appropriate databases, to assess the evidential weight of fingerprint matches.

24. FSS has used its experience in statistical evaluation of forensic evidence and advanced signal processing to develop a tool for evaluating the strength of fingerprint matches. The underlying statistical method has been subjected to rigorous peer review.27 Whilst academic groups have contributed scientific literature in this field, only FSS with its blend of research, forensic practice and quality accredited procedures has developed an entire solution fit for deployment in court. To date, the UK has been rather slow to respond to this innovation, which is likely now to be implemented first in the US.

MAJOR INCIDENT CAPACITY & CAPABILITY

25. The UK requires sufficient forensic capability and capacity to respond to major incidents. 4,500 exhibits were submitted to the FSS following the 2005 bombings in London on 7/7 and the attempted bombings on 21/7. Over 100 FSS scientists immediately delivered thousands of hours of forensic analysis leading to identification of the 7/7 bombers within 24 hours and the conviction of those responsible for the 21/7 attempted attacks. FSS is the only UK organisation with experience in providing evidential forensic analysis of samples 22. Forensic Science is highly context specific. Fragmentation of the supply chain from crime scene to court room, with police and FSPs analysing sections of cases impairs the holistic evaluation of evidence in context. For example, in several instances we have encountered submission to FSS of swabs taken by police from weapons, rather than submission of the weapons themselves. This has led to scientists being unable to comment on how blood may have been deposited on the items and hence its significance.

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24. Piloted in autumn 2010 by the FSS with the UK Borders Agency (UKBA) in analysis of complex handset data from a visa fraud case.
27. Neumann et al.,(2011), accepted for publication in Royal Statistical Soc, Read Series.
from terrorist incidents. The expertise and capacity for this type of response must be available for immediate deployment, but cannot be dedicated since major incidents are rare. FSS drew on experts from multiple disciplines including biology, DNA, document examination, mobile phone analysis, toxicology, marks and traces, firearms and fibres & hair analysis. Fragmentation or loss of this experience will reduce the UK’s ability to respond to a major incident.

26. FSS investment led to development of advanced software for storage and matching of DNA profiles between suspects and crime scenes, between crime scenes, individuals and their relatives. Disaster victim identification (DVI) software is available commercially, but FSS has the only immediately available, UK-compatible, validated software to underpin an effective, end-to-end DVI service.

Cold Cases

27. New developments open up the potential for re-analysis of unsolved cases. Cold case reviews rely on:
   — Archives.
   — Cold case scientists with particular skills and dedication.
   — Pioneering technology.

28. FSS archives contain over 1.5 million case files and a vast number of “retained materials” including DNA, microscope slides, fibre tapings and debris recovered from examined items. These do not exist in Police Forces or elsewhere. Detailed understanding of the archive system, ways of documenting results and historic forensic methods are critical: fragmentation or loss of these skills risks future cold case success.

29. FSS has assisted over 38 police forces in their reviews of historic offences and Home Office sponsored projects Operation Stealth and Operation Advance (which produced a 23% match rate from 525 cases).

30. Over 220 cold case convictions dating back to the 1970s, including homicides and sexual offences, have relied on FSS expertise, archives and technology. There are thousands of further cold case reviews in progress, or in planning. ACPO recommends all Forces review their undetected murders at least every two years.

Quality and Regulation

31. The ISO17025 standard is considered to be the appropriate quality standard for forensic laboratories. The European Network of Forensic Science Institutes (ENFSI) requires members to be accredited or working towards this standard, all suppliers of DNA profiles to the NDNAD and major FSPs in the UK must be accredited.

32. The role of the Forensic Science Regulator (FSR) is to establish and monitor compliance with quality standards for forensic science delivery to the police and wider criminal justice system. Since taking office in 2008, the current FSR has established a regulatory framework for the UK. This is based on a set of standards planned for issue in April (2011); full implementation was originally planned for December 2013. However, the Regulator does not have statutory leverage for enforcing compliance with the standard. NPIA's forensics project on implementation of quality standards in Police Force in-house forensics does not expect to fully comply with the Regulator’s requirements and we understand that the expected timescale has slipped further to 2015 and beyond. There is no clear commitment from all police forces to meet these standards given the associated costs.

33. With the exception of providing DNA profiles for the NDNAD, there are no statutory requirements for science used within the CJS to be compliant with any standards so the regulatory framework remains effectively voluntary.

34. FSS invests more than 15% of its cost base in maintaining an accredited quality system. Police labs and small FSPs not compliant with ISO17025 do not incur this cost and have a significant cost advantage in a market where price is the dominant factor in contract award.

35. Accreditation to an internationally recognised quality standard does not guarantee that mistakes will not be made. However, it is a key component of an overall quality framework. Crucially, when embedded throughout an entire organisation, with escalation procedures and management responsibility clearly defined, it underpins the maintenance of a culture of continuous improvement so when mistakes are made, these are investigated and measures taken to help prevent recurrence.

36. Notwithstanding the above, ISO17025 was never designed to cover expert interpretation of complex information in a case-context specific manner or provision of expert opinion evidence in court. FSS quality

29 ISO17020 is the applicable standard for crime scene investigation.
30 ENFSI Framework for membership.
31 NPIA NDNAD Delivery Unit, Standards of Performance and Monitoring of Suppliers of Profiles to the National DNA Database, 29 July 2010.
32 In the FSR Annual Report of January 2010, the target date for the implementation of the standard framework across all police forces, other law enforcement bodies and commercial providers is December 2013. Forensic Science Regulator, Annual Report, December 2009.
33 NPIA Forensics21 Update January 2010.
framework includes defined standards and personal competence requirements for casework assessment and interpretation. Inclusion of such standards into the FSR’s standards framework is planned, but is unlikely to be achieved in the near future.

37. Furthermore, the breadth and depth of expertise in FSS is used in training and mentoring new staff over an extended period, in peer review of all findings and interpretation and in assessment of the personal competence of expert witnesses in court. The importance of experience has been reiterated in recent Court of Appeal rulings, for example R v Weller. Fragmentation of the skill base risks losing this breadth and depth.

38. The FSS has been instrumental in defending key forensic science techniques (such as low copy number DNA profiling) on behalf of the whole sector, within the CJS, using a number of its world respected research scientists in addition to its court reporting scientists. Thought should be given as to how challenges such as these will be dealt with in the future.

**Impartiality**

39. Forensic science has to be impartial, and to be seen to be impartial. This issue was raised in a recent critical review of forensic science in the US, in which it was recommended that forensic provision should be separated from police processes. Whilst mechanisms can be put in place to help safeguard impartiality from being compromised, the risk remains higher for undue pressure to be placed on scientists if they work within the same organisation as the “customer”.

40. Robert McFarland (who undertook an independent review of the FSS in 2002–03) expressed concern that police forensic experts could appear in court as expert witnesses, citing the review by Lord Justice Auld following which the criminal procedure rules were laid down, specifying that the expert’s duty to the court overrides “any obligation to the person…by whom he is paid”.

**European Policy**

41. FSS provides the UK government with representation in ENFSI. ENFSI has exclusive status in the EU on all matters regarding forensic science. When FSS closes, UK government will lose influence in European forensic science decision making. This has implications for UK government on implementation of the EU Prüm decisions. Currently FSS scientists sit on the main ENFSI working groups and both standing committees (European Academy of Forensic Sciences; Quality and Competence Committee) and are in a strong position to influence standards and policy.

**UK Skill Base**

42. The dramatic decrease in the size of the external accessible forensic market will most likely lead to further loss of highly skilled forensic scientists from the UK. FSS scientists have already moved to New Zealand, Australia and Canada as a result of uncertainty in the UK and skilled FSS scientists have been solicited for positions in the USA, Canada, Sri Lanka and several European countries since the closure announcement. Other experienced staff have left, or plan to leave, forensic science altogether.

43. Forensic Science is learned at the bench, taking 5–10 years of training, mentoring and experience for a science graduate to attain competence in interpretation of complex cases. Continuing loss of forensic scientists damages the UK knowledge base and the ability to train for the future. FSS trained many staff now employed by commercial forensic science providers, reducing recruitment and training costs for all UK providers.

**Future View**

44. Alternatives to a simple winding down the FSS have been suggested by eminent scientists in the field.

Professor Morling, President of the International Society for Forensic Genetics, has called for establishment of “a properly funded national centre to host research and training facilities, and a laboratory that could conduct specialised casework investigations, hold reference data and provide a quality-assurance service for other labs.”

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34 Regina versus Peter Weller, Neutral Citation Number: [2010] EWCA Crim 1085: paragraphs 42, 44, 45, 49.
37 Auld 2001 http://www.criminal-courts-review.org.uk/auldconts.htm
38 ENFSI has formal EU monopoly status in relation to all matters on forensic science.
39 Scottish Police Services Authority and Forensic Science Northern Ireland have ENFSI membership but do not sit on the standing committees or have a leadership position equivalent to FSS.
40 The treaty of Prüm was converted into EU-legislation by two Council Decisions (2008/615/JHA and 2008/616/JHA) and requires that all 27 EU-countries must have implemented the council decisions re data exchange by 26 August 2011. To facilitate the comparison of DNA data (i.e. reduce the number of false positive matches), the European Standard Set (ESS) of areas of DNA tested was increased to include 12 short tandem repeat (STR) regions. The specification was written in Council Resolution 2009/ C 296/01 was adopted on 30 November 2009 and is to be implemented by member states no later than 30 November 2011.
41 Morling, 8.1.2011, New Scientist.
Professor Sir Alec Jeffreys, the inventor of DNA profiling, shared Morling’s concern, questioning “Who will provide the expertise for complex and inter-disciplinary investigations? Who will develop and refine new technologies?” and opining that “the necessary reduction in costs could be better achieved by restructuring and refocusing the existing body rather than closing it.” Budowle et al. and Joseph Bono, President of the American Academy of Forensic Sciences, have urged that the decision to wind down the FSS be reconsidered.44

These comments, which we support, raise the issue of activities that need to be continued “after FSS” to serve the Criminal Justice System. During the transition we will be particularly vigilant that these strategic activities, and the people who deliver them, are not cast aside.

IN CONCLUSION

45. We believe that the UK needs a policy for forensic science which, if supply is to be divided between police laboratories and commercial providers, includes a clear market framework that will encourage competition, investment and the scientific excellence for which we are already renowned. Together, the policy and market framework should aim to secure:

- Scientific integrity and quality throughout the CJS.
- Capability and capacity to deal with major incidents.
- A repository for reference data collections other than police national databases.
- Niche skills (e.g., for cold case reviews, major homicides and counter terrorism).
- Continuing innovation and its proper reward.

As our evidence aims to set out, capability and capacity are inextricably linked. In order to maintain the necessary infrastructure, skills, knowledge and data, there needs to be a close working relationship between researchers and operational practitioners. This will necessitate, either in the public or private sectors, some centrally sponsored focus that covers both research and high level operational capability at sufficient scale and critical mass to be effective and efficient.

44. The highly skilled forensic practice employed in the context sensitive interpretation of complex cases is fragile and at risk. An effectively regulated but vibrant, innovative environment is required, to enable the CJS to benefit from application of the best science to this field.

Forensic Science Service
16 February 2011

APPENDIX

SCIENCE & TECHNOLOGY COMMITTEE INQUIRY TERMS OF REFERENCE:

1. What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?
2. What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?
3. What is the financial position of the Forensic Science Service?
4. What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?
5. What are the alternatives to winding-down the Forensic Science Service?
6. So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

REVIEW OF RESEARCH & DEVELOPMENT IN FORENSIC SCIENCE

The aim of this review is to provide Ministers with advice on the current and likely future status of forensic science research and development in the UK and to make other recommendations as appropriate.

The terms of reference are:

1. The scale, scope and impact of the research and development carried out by forensic science providers and related organisations (in the public and private sectors).
2. The extent, and ways in which, forensic science practice assesses the relevance of, and accesses, the latest advances in technologies and techniques.

42 Jeffreys, 22.1.2011, New Scientist
43 Budowle et al Investigative Genetics 2011, 2-4
44 Letter from Joseph Bono, President of the American Academy of Forensic Science to Rt Hon. Home Secretary, 4 January 2011. Prospect website (http://library.prospect.org.uk)
3. The scale and scope of forensic science research undertaken in academia and its links with the forensic science practice.

4. The current and potential contribution of international research networks to UK forensic science research and practice.

The scope of the review is:
1. The scope will include, but not be limited to, fingerprints, DNA profiling, digital forensics (e-forensics) and more specialist aspects of forensic science. Forensic pathology and forensic medicine will be excluded from the scope of the current review.

2. This review will concentrate on research and development relevant to forensic services for the CJS within England and Wales. However, with respect to understanding the breadth of research and development itself, the scope will include the UK.

3. Aspects such as commercial considerations, the size of the forensic market and the provision of forensic science services will be outside the scope of the review, as will the assessment of individual technologies or techniques.

Supplementary written evidence by the Forensic Science Service (FSS 87a)

FSS Business Transformation Programme

FSS Business Transformation Programme was launched in October 2008 with the following objectives:

— To align core operational business to the future customer requirement.
— To become a profitable and sustainable business within a right sized operating platform.
— To develop FSS position as employer of choice.
— To provide the best positioning and value for the shareholder and the UKCJS within the marketplace.

The Business Transformation Programme covered the entire company and its scope included:

— To design and implementation of a new national operating model.
— The redesign of operational processes and roles to maximise efficiency, including improved timeliness through the elimination of unnecessary activity.
— The design and implementation of enabling technologies to support the transformation of operational processes.
— The development of an organisational design consistent with becoming a high quality, cost effective provider of customer service.
— The rationalisation of the FSS estate to make more efficient use of its assets and resources.
— The change in culture to become a customer focussed service.
— To support the creation of a company that is the employer of choice.

As of December 2010 the Business Transformation Programme had achieved the following:

— An employee forum had been established to allow non TUS members of staff to have a voice in the changes that the company would make during the course of the programme.
— A new Ways of Working model had been established through consultation with FSS employees to support the cultural change.
— All People Managers had been re-selected through assessment centres that measured their performance against the FSS Ways of Working.
— A national operating model had been implemented which was aligned to the National Procurement Forensic Framework. This was based on National Business Streams designed to closely align FSS scientists to customer requirements.
— Three FSS sites were planned for closure—Chepstow in December 2010 and Chorley and Priory House in March 2011.
— A National Customer Contact Centre had been designed and implemented giving a single point of contact for all FSS customers.
— Over half of FSS scientists had been trained in new processes, designed using Lean Sigma principles.
— Over half of FSS scientists had been trained and were using eCase, an electronic casefile management system designed as part of the programme. eCase was planned to significantly streamline and automate the administrative parts of the forensic process.
— New DNA processing lines had been established at each of the FSS’ ongoing locations. The new lines were designed to bring benefits from an efficiency and quality perspective and to increase success rates.
— Over a third of FSS DNA Reporting Scientists had been trained and were using FSS DNA INSIGHT™ — a FSS designed software package that automates DNA interpretation. This software was due to deliver improved quality and efficiency within the DNA interpretation process.

— A new pay and grading system had been introduced across the entire organisation.

— The FSS pension scheme had been changed to a more affordable scheme giving significant costs savings over that in place.

— FSS was on course to have reduced its headcount by 608 from 1,874 to 1,266 by the end of the 2010–11 financial year.

Further supplementary written evidence from Forensic Science Service (FSS 87b)

INVESTIGATION INTO WIND-DOWN OF FORENSIC SCIENCE SERVICE: FURTHER INFORMATION

After last week’s session at which FSS gave evidence before the Committee, we agreed to forward some further information to assist the enquiry further. One aspect of this was around the size of the total forensic market, including the work the police currently do in-house.

Whilst it is difficult for FSS to comment accurately on this, the HMIC report, “Valuing the Police” from July 2010, estimates that in 2009–10, £171 million was spent internally by police forces on forensic science, versus £178 million spent with external forensic science providers. It was also noted that the amount spent internally has rapidly increased over recent years, whilst that made available to forensic providers has fallen (estimated to have dropped to approximately £110–£100 million this year—ie an approximate 40% drop in one year).

Some of this drop is attributable to the prices of “commodity” products such as DNA and drugs tests being driven down by the competitive tendering process, saving police forces and the tax-payer significant amounts. More recently, however, forensic providers have seen a significant reduction in size and quantities of submissions as a result of forensic work (what many forces are describing as “pre-screening”) being undertaken in-house. If this trend were to continue, the market available to external providers would be reduced to the provision of commodity and analytical tests only, with no requirement to provide holistic, interpretive evidence.

The key questions suggested by these trends are:

1. What is the size of the market for external suppliers likely to be in 2011–12 and beyond versus the £110 million this year, and how these changes can be explained?

2. What will the value of in-sourced work be in 2011–12 and beyond versus the £171 million for 2009–10 and an explanation for the changes?

A more detailed analysis, including estimation regarding the size of the market is available in the 2010 PwC report commissioned by ACPO/NPIA.

In addition to the above, Dr Gill Tully is also compiling additional information for the Committee on archiving and cold case issues, the Silverman review and issues around complex case work.

Bill Griffiths
Chairman
Forensic Science Service
28 March 2011

Further supplementary written evidence submitted by the Forensic Science Service (FSS 87c)

Additional documents requested by the Committee annexed to this email:

Annex A: The extended version of the Bernard Silverman paper [the appendices are not published].

Annex B: An overview of our archives.

Annex C: An overview of complex case work.

In addition to these documents, Gill Tully has also asked me to pass the following comments to you regarding the evidence session held on 30 March:

“We listened with interest to the oral evidence sessions on 30 March. In relation to remarks from Professor Fraser regarding lack of collaboration by the FSS with academia (including being difficult to work with and protective of information), I would particularly like to draw to the attention of the Committee the following information:
— Since 2000, the FSS has hosted 41 MSc students at its facilities conducting collaborative research; of these, 12 were from Professor Fraser’s Institute.

— Since 2008, of the 54 papers published by FSS, 33 are co-authored with collaborators, of which 27 include academic groups and indeed six include authors from Professor Fraser’s group.

Further, in relation to Professor Jeffreys’ evidence that FSS is not working on the latest advances in genetics, it may be of interest to the Committee that we are collaborating with a government agency on the latest advances in large-scale genetic sequencing, and prior to the closure announcement, we were in discussions to test a system for assessing geographic origin and physical appearance of individuals. These projects are directly in line with the areas that Professor Jeffreys suggested the FSS should have been, but were not, working on."

Lisa Palmer
Chief Press Officer
Forensic Science Service
20 April 2011

Annex A

THE EXTENDED VERSION OF THE BERNARD SILVERMAN PAPER [THE APPENDICES ARE NOT PUBLISHED]

INTRODUCTION

The Forensic Science Service (FSS) has a major influence on the character of forensic science on a global scale.

The FSS remains the primary provider of forensic R&D and groundbreaking techniques in the UK, and is a major contributor to the development of forensic science on an international scale of which our country can be justifiably proud. It is also pre-eminent in the development and improvement of standards for forensic science worldwide. Indeed, the FSS was the first forensic organisation to adopt international quality standards and was accredited with UKAS to M10 standards from 1993, six years prior to the genesis of ISO 17025. Accreditation to ISO 17025 was achieved by the FSS in 2002.

FSS R&D Group

The research group at the Forensic Science Service comprises professional career research scientists with a wide scope of expertise and many years experience in delivering innovative solutions to the forensic field. Our multidisciplinary team of molecular biologists, chemists, electronics experts, statisticians, software developers and engineers is perhaps unique in the world. Our strength is not in the discovery of new techniques per se, rather in the assessment, adoption and adaptation of available technologies to develop robust, court-ready processes. In collaboration with our case working colleagues, we have demonstrated the capability to understand problems and define viable solutions. The implications of new data types and the formation of novel processes and systems are thoroughly tested and validated to be robust for presentation in the UK courts of law. We have implemented approximately 120 new or significantly improved methods since 2005. All these methods and improvements have been peer reviewed at the required level, then independently assessed by the relevant experts in UKAS and signed off as appropriate to the field. The scale of FSS R&D effort is outlined in Table 1 and Figure 1.

FSS R&D employs 48 scientists and 10 support staff who are dedicated to the research and development of new forensic science technologies. Between them they have 680 years of relevant experience, 52 undergraduate degrees, 12 Masters, 14 PhDs and have published in close to 200 scientific papers. The R&D function has invested significantly in continuing professional development for the team to increase skills and knowledge in areas of strategic importance. This has resulted in the award of three PhD degrees, one Masters degree, two BSc degrees and a further 18 Open University modules. All of these directly contribute to current and planned innovation in forensic science.

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<th>12/05–03/07*</th>
<th>04/07–03/08</th>
<th>04/08–03/09</th>
<th>04/09–03/10</th>
<th>04/10–03/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Running Costs £k</td>
<td>5,889</td>
<td>3,530</td>
<td>4,014</td>
<td>4,112</td>
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<tr>
<td>Capital Investment £k</td>
<td>287</td>
<td>7</td>
<td>1,385</td>
<td>1,450</td>
</tr>
<tr>
<td>No. of dedicated R&amp;D staff[1]</td>
<td>87</td>
<td>68</td>
<td>61</td>
<td>59</td>
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<tr>
<td>External funding £k</td>
<td>539</td>
<td>184</td>
<td>283</td>
<td>424</td>
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</table>

Table 1: FSS R&D Scale & Funding summary

* extended period following GovCo vesting 12/05

In the 5 full years prior to vesting (Apr 00—Mar 05), FSS R&D running costs were (respectively, £k): 3,173, 3,670, 3,471, 2,623, 3,952.

In addition to the dedicated Research & Development team, the FSS has 23 Principal Scientists (PS) who lead improvements in their area of operational practice. Working with their teams and the Standards and
Validation (S&V) team they critically review all validation plans and reports prior to authorisation for a
technique or improvement to be used in casework. The work of R&D, S&V and the PS is fully integrated and
provides a unique and complementary skill set for delivery of the latest advancements in science & technology
into forensic practice. The qualifications and experience of R&D, the Standards and Validation team and the
Principal Scientists are summarised in Table 2.

![Running cost and External funding 2006-2011](image)

**Figure 1: Running costs and external funding for R&D December 2005 to present.**

FSS’s dedicated R&D facilities (c.800m²) include: fully equipped DNA laboratories; secure laboratories for
classified R&D and for the safe keeping of the controlled drug collection and our chemical standards;
electronics facilities for e-forensic R&D; dedicated servers and the associated computer network for research
into statistical solutions to the evaluation of evidence, and for expert systems software development, testing
and validation.

The FSS Information and Computer Technology (ICT) department and the lead operational scientists based
in our case working laboratories also contribute to R&D. Indeed, we consider the involvement of operational
forensic scientists and the support of our colleagues in ICT to be imperative in the effective delivery of research
and development, leading to implementation of new or improved methods into casework. The integration of
dedicated facilities and people within the wider forensic community (practitioners, quality group, academics,
and industry) is essential to successful innovation (Figure 2). The preservation of skills in a dedicated R&D
facility closely associated with forensic practitioners and collaborating with academia, industry and CJS
stakeholders is the optimal way to safeguard innovation in UK forensic science for the future.

<table>
<thead>
<tr>
<th>Research &amp; Development Function</th>
<th>Number of Undergrad Degrees</th>
<th>Number of Diplomas</th>
<th>Number of Masters Degrees</th>
<th>Number of PhDs</th>
<th>Number of Papers Released</th>
<th>Years Relevant Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research &amp; Development Function Standards &amp; Validation Team</td>
<td>58</td>
<td>52</td>
<td>20</td>
<td>12</td>
<td>14</td>
<td>188</td>
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<tr>
<td>Principal Scientists (Practitioners)</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
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<td>25</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>89</td>
</tr>
</tbody>
</table>

**Table 2: Summary of qualifications and experience of the key players in innovation within the FSS.**

We conduct applied research. Our aim is to identify scientific advances (primarily from academia and industry),
develop them to meet forensic requirements, and then validate and implement for intelligence or
court use. For example, the FSS worked with Professor Sir Alec Jeffreys to bring his invention of DNA
Fingerprinting into forensic practice in the late 1980s. We subsequently developed robust PCR-based methods
from early published work and collaborated with industrial partners to develop robust protocols, validate and
implement STR multiplexes such as SGMplus™ and the use of fluorescent fragment analysis instruments for
forensic analysis, publishing joint papers with our collaborators through the peer review process. These
innovations provided a significant improvement over the original Jeffreys’ technique and created the blue-print
for forensic DNA analysis and databasing that has subsequently been emulated by virtually every other forensic
laboratory worldwide. Without a substantial dedicated R&D function closely associated with operational
forensic scientists, it is difficult to envisage how these advances would have been brought into practice. There
is the potential to miss the introduction of next generation genomics technologies, an area we have identified
as an important future technology in forensic science, if nothing is done to preserve the innovation capability
within the UK.
Figure 2: Required integration of R&D, FSS practitioners and collaborators to provide robust innovation to forensic science.

Scope of Work

Our recent achievements include:

— The inception, development, validation and implementation of new automated DNA processing facilities and DNA profile interpretation software. This has increased the quality and efficiency of DNA processing, providing cost reductions to be passed on to the customer.

— Development of a probabilistic method for the evaluation of fingerprint evidence (Dactsys), which provides a robust controlled and transparent means of reporting the evidential strength of fingerprint matches to the criminal justice system. This has the potential to increase the value of poorer quality finger marks and may reduce the risk of misidentification as seen recently in Scotland in the Shirley McKie case.

— Data management systems that can identify complex association networks from mobile phone data and present interactive onscreen results. These demonstrated cost and time savings in police investigations through the use of interactive graphical frameworks.

— Development and implementation of a number of DNA analysis and interpretation software solutions to:
  — Analyse relatedness between samples for use in Disaster Victim Identification.
  — Facilitate data storage and comparison (a DNA database solution)
  — Allow the interpretation of complex DNA profiles, increasing the value afforded by DNA samples with mixed contributors (ie mixtures of more than two contributing persons).

— Development of an electronic casefile system deployed across multiple sites and c.660 users. This allows the electronic searching of case files, allowing novel links between cases to be made.

— Design and implementation of robust 16-loci DNA multiplexes compliant with new European legislation, in collaboration with an industrial partner (current standard is 11-loci). This will improve the results gained from challenging samples and improve the statistics of matching.

— Development of rapid DNA analysis system to produce new 16-loci STR profiles from a reference sample (taken from a suspect) to database within two hours, to point of transfer to a commercialisation partner. With such an instrument, the suspect can be DNA profiled in the custody suite.

Our current and planned projects include:

— Validation of 16-loci multiplexes for the application to low template DNA samples, to provide sensitivity with 16 loci equal to current low template DNA processes for use with very low level DNA samples.

— Providing probabilistic network tools and structured data sets to enable forensic practitioners to interpret evidence through scenario evaluation.
A bibliographic citation is a reference to a published item such as a book, article or web page. The completion of many current and future undertakings is unlikely before the planned closure of the FSS.

**IMPACT**

The most obvious example of FSS research impact is in the field of forensic DNA analysis, from its inception in 1985 to the development of the world’s first criminal DNA database, the full automation of DNA processing and in the near future, the deployment of rapid DNA profiling devices in custody suites. The impact of the FSS innovation in the field of DNA analysis for Human Identification is outlined in Figure 4.

Publications are a by-product of FSS research rather than an end in themselves, so direct comparison against academic publication rates does not adequately reflect FSS research productivity. Nevertheless, FSS staff have been amongst the most prolific publishers in the field, with c.200 papers since the year 2000, many in collaboration with academic or industrial partnerships. These papers have been cited in the work of others 3660 times. The FSS holds approximately 50 patent families.

A summary of publications and citations for the period 2005 to 2011 is shown in Figure 5. Note that the citation rate is higher for the FSS (12.9 citations per paper on average) compared with the citation rate for the selected Universities. This demonstrates that more scientists are using the published work of the FSS in subsequent developments compared to the Universities. i.e. the FSS R&D has a wider impact in academic terms compared with the selected universities.

FSS innovation is widely considered to have had world-wide impact, indeed in the weeks following the announcement of FSS closure, a number of prominent scientists voiced their concern, including the President of ENFSI, the President of the American Academy of Forensic Science, and a number of leading forensic scientists from around the world. The history and culture of innovation and professional excellence in FSS has led to its expertise being sought for complex international investigations such as in Afghanistan, Jamaica, Kosovo, Somalia, Kenya, Brunei, British Virgin Islands, Sri Lanka, Pakistan and Iraq. We have conducted casework using groundbreaking techniques in many jurisdictions. Since 2004, the FSS has provided services directly derived from recent FSS R&D innovations on 232 occasions for 72 customers worldwide, including 24 foreign police forces, in 19 Countries, which generated over £1.6 million revenue for the business. The FSS works with many UK police forces reviewing thousands of historic unsolved offences and in the UK alone, our innovations have led to resolution of numerous cold cases where the latest technologies have been used to examine and test retained materials to obtain additional information to help progress a case. For example, the latest DNA techniques can be used to develop DNA profiles where this had previously not been possible. Other options include the application of improved methods of fingerprint enhancement and recovery to generate fingerprints on retained items. Our track record in cold case reviews demonstrates convictions in over 220 serious cases dating back to the 1970s. The FSS’ familial searching DNA technique, the first of its kind in the world, has helped to solve 19 UK cold cases.

A further example of FSS innovation is the “Manufacturer Elimination Database”. The FSS realised early in the DNA expansion program that matching DNA profiles were being generated from crime samples that were geographically distant and with no similarity in *modus operandi* and identified that some of these profiles were likely to have been generated due to contamination of the consumables used in the forensic process. R&D instigated, built and maintain a DNA database containing the DNA profiles from staff of many of the manufacturers who supply consumables (such as tubes and swabs) to the forensic community. This, and a second data repository containing contaminating profiles of unknown source, is used to identify DNA profiles which are the result of contamination, rather than from a crime sample, prior to loading to the National DNA database. Identification of such profiles before loading to a National DNA Database reduces resource wasted on spurious investigations. One such investigation was the “Phantom of Heilbronn,” a notorious German serial...
killer, who had apparently left DNA traces in France, Austria and Germany, in over 30 separate criminal cases. An estimated 16,000 police hours and 2 million Euros were spent pursuing this individual. The FSS alerted European colleagues that these links could be due to contamination and on further investigation, the “Phantom” DNA profile turned out to be from a home-worker packing swabs for forensic use.

The FSS contamination detection databases help to eliminate such instances in the UK and beyond. Indeed, the contamination databases have been used to support casework investigations 30 times in the last 12 months alone, on behalf of other forensic science providers (FSPs) such as Orchid Cellmark, LGC, Forensic DNA services, FSNI and SPSC forensic services.

We have also performed searches on behalf of international forensic laboratories in Germany, Sweden, Tasmania, Australia, New Zealand, The Netherlandns, France, Denmark, USA, Canada, Estonia and Portugal. To our knowledge, no other forensic provider in the world offers this service, which was initiated by and continues to be run by FSS Research & Development Department.

Figure 3: Innovation Roadmap
Figure 4: Impact of FSS R&D on the field of Forensic Human Identification. Many of the innovations were world first in forensic science.
Figure 5: Publications and citations of work in forensic science (average per publication) of FSS, Strathclyde University, Teesside University, Northumbria University and Kings College University of London (Social science publications have not been included).

Although not yet implemented into operational use, the FSS fingerprint evaluation tool (Dactsys) is likely to have a major international impact, particularly in the light of the NAS Report. 

NATIONAL AND INTERNATIONAL NETWORKS

The FSS plays a leading role in professional bodies. We are a full member of the European Network of Forensic Science Institutes (ENFSI) and play an active role in the Quality and competence committee and the European Academy of Forensic Sciences standing committees. We are also members of ENFSI working groups on DNA, Drugs, Fingerprints, Firearms, Fire and explosive Investigation, Forensic Information technology, Handwriting, Marks, Paint and Glass, Hair, and Scenes of crime. FSS employees also contribute to the Forensic Science Regulator’s Specialist Groups in DNA Analysis, Contamination, Quality Standards, Practitioner Standards and Evidence Assessment.

The FSS plays a leading role in collaborative research in the EDNAP group and the UK Body Fluid Forum; large volumes of data are generated through such networks by spreading work amongst laboratories. The coordination burden is significant, so ongoing support by laboratories with dedicated researchers is important. ENFSI is an invaluable international network, but is less involved in research than in standards and quality; its role in promoting validation standards through the Quality and Competence Committee however is vital and actively supported by FSS.

The FSS is the lead partner in a major EU FP7 funded project, collaborating with academia in the USA, industry in the UK, and with forensic practitioners in Europe (Germany, Austria, and the Netherlands).

PARTNERSHIPS AND FUNDING

Active horizon scanning from literature and patents, conferences and via collaborators enables identification of potentially valuable technologies. Initial evaluation, either internal or collaborative, may lead to the initiation of formal research. An example of such a project at the evaluation phase is the application of next generation sequencing, on which we are collaborating with a government laboratory. Prior to the closure announcement, the FSS was also one of four organisations worldwide which were included in an evaluation programme for a forensic “SNP chip”, which aims to provide information on an individual’s geographic origin and physical appearance from a DNA sample.

47 http://www.isf.org/EDNAP (European DNA Profiling Group)
There are few calls specifically for forensic/crime initiatives from the UK Research Council (RCUK). The “Think Crime” program from EPSRC has been to our knowledge the only RCUK program specifically aimed at the forensic field. According to the EPSRC website, over £10 million was made available for the development of future forensic capability by EPSRC. Such funding typically allows for the investigation of the basic or fundamental science needed to underpin a novel technique. Once this stage in the research process is complete, complementary development to bring fit-for-purpose solutions, device or process design, robustness testing, and field testing is needed. Funding for such development activities is scarce and inadequate. Typically this falls to the forensic providers to support, a position which is becoming increasingly untenable in the ever more competitive marketplace. This proves a major barrier to the adoption of academic research into forensic science. There may be a misguided belief that academic research, on its own, can bring innovation into practice; however the gap between academic success and forensic robustness is sizeable. To our knowledge, none of the EPSRC Think Crime-funded projects (£10 million funding) has resulted in a validated and implemented forensic process.

Since vesting as a GovCo in 2005, no new research funding has been granted to FSS from the Home Office and R&D is primarily internally funded, with some external funding won on a competitive basis (Table 1). The largest externally funded project is development of FSS rapid DNA technology for casework samples which is funded by the EU Seventh Framework Programme to the value of €3.2 million. In this project, the Forensic Science Service is leading a consortium of world-leading forensic, academic and industrial partners to deliver a validated instrument (MiDAS) for rapid processing of forensic samples. The three-year project commenced in 2010, and is on track against milestones.

A summary of FSS collaboration with academics, forensic institutes and industry is shown in Appendices 1 and 2. We have funded academic research, and also developmental projects to bring the results of prior research into a fit for purpose state for implementation to the forensic field. Investment by the FSS between 2000 and 2011 in excess of £7.5 million has been made to support research in forensic science in commercial and academic partnerships in fields including optical systems engineering, microfluidics, drug profiling, evidence interpretation strategies and the development of expert systems for the automation of DNA interpretation (Appendix 1). Of this, over £3.5 million has been used to directly support academic research.

Since 2000 we have provided work placements for 41 MSc students from academic institutes including Strathclyde University (12), Kings College London (14), UCLAN (four) and others. In the same time period, we also provided 12 month sandwich placements for 18 BSc students.

The FSS currently supports three PhD students at UCL London, Belfast University and Sheffield University through the CASE studentship scheme.

**Academic vs Applied Research**

The translation of successful academic research projects into a forensic application can be challenging. A lack of understanding of the real problems and issues from the perspective of a forensic practitioner means that solutions developed by academia alone are rarely adequate for the courts. For example, a well respected group of academic statisticians have published models in peer reviewed journals, but no forensic organisations have implemented these methods.

The successful introduction of novel statistical models to forensic practice requires practising statisticians that have:

- access to real data;
- expertise to understand the intricacies of the area; and
- training to understand the complexities of statistical research and make academic research fit-for-purpose.

FSS R&D statisticians have developed and validated a model for de-convolving DNA mixed profiles based on academic research. This model has been implemented into the FSS, providing consistency, robustness, and cost effectiveness for the courts and the taxpayer.

A further example of understanding the issues was the development of processes to assist in the interpretation, rather the retrieval of data from electronic devices. Using database techniques, data-mining algorithms and web technologies, the electronic forensic team in FSS R&D have created a new reporting method that presents the data downloaded from mobile phones (around 250 pages of text data) pictorially in an interactive web page. This technique was trialled with the UK Borders Agency and considerably assisted the interpretation of the case data.

Once research has demonstrated that a technique is suited to forensic practice, implementation is considered. For internal implementation, the procedure is straightforward and sole barriers are resource (eg equipment purchase and/or abstraction of operational scientists for training) and timing (availability of UKAS/NAS for accreditation). Validation is performed, and UKAS accreditation sought. Where a new technique fits within processes leading to loading DNA profiles to the NDNAD, accreditation by NAS is obtained prior to implementation.
However, if a development requires changes to the NDNAD or impacts on Policing or Courts, the barriers to innovation are greater. For example, the probabilistic interpretation of fingerprints was identified as a challenge in the Home Office Science and Innovation Strategy 2009–2012. FSS developed a solution to this challenge and presented it to ACPO Technology and Innovation Group (01/09). This was well received and led to the involvement of the fingerprint Expert Network. Despite this innovative approach having the potential to improve both the quality and quantity of evidence presented in courts, progress stalled. Forensic science is procured by the police, but the courts are the ultimate customer; relying solely on commercially viable research in forensic science is likely to inhibit innovation of value to courts.

Further, the implementation of innovative processes into the National DNA Database has proven more difficult since control of the database was transferred to the NPIA. For example, whilst the FSS and other Forensic Science Providers are ready to implement new multiplexes into standard process, the NDNAD remains unable to accept these 16 locus profiles, and is unlikely to be in a position to do so before 30 November 2011, the deadline afforded by EU legislation. It is disappointing to see the UK fall behind in DNA technology whilst other European countries forge ahead in what was once considered the UK’s domain.

Notwithstanding the plan for Science and Innovation in the Police Service, there is insufficient open and constructive dialogue between police, CPS and researchers (whether in FSPs, academia or industry). NPIA’s coordinating role can reduce direct communication between police forces and forensic providers; in practice, FSS interaction with Scottish and Northern Irish FSPs and police forces has proved simpler.

**The Future of Innovation in UK Forensic Science**

Innovation in forensic science is essential if the UK wishes to provide continuous improvement to the criminal justice system. It is imperative that this work be allowed, and encouraged to continue; failure to do so will result in the UK world lead in this area being eroded, new types of forensic evidence not being made available to the CJS and some specialist forensic applications ceasing to exist. In addition, capability to respond to continually evolving challenges to scientific evidence in courts will be degraded by the irreplaceable loss of expertise.

No organisation in the UK other than the FSS has the capability to deliver innovation to forensic science on a large scale; university departments have a principal contribution to make in undertaking fundamental research which can be adapted to forensic applications but typically they lack the in-depth experience of taking ideas through from concept to a rugged and validated process that can withstand the rigours of our adversarial judicial process; police laboratories lack both the necessary environment and the critical mass of research staff required to undertake substantial research projects. Furthermore, there is no government research capability in this area, the closest being the Home Office Police Scientific Development Branch which lacks DNA capability and experience. Despite the world-renowned reputation and track-record of FSS R&D for innovation and delivery, other commercial companies are unlikely to be able to absorb these staff or their work as an overhead in an increasingly competitive and shrinking commercial market.

The capability of the R&D team in the FSS is world class. Exposure to real world applications has refined the scientific skills and methodologies required to provide dedicated, world class forensic research, with a reputation for successful implementation. In our opinion, dissolution of the team, given their experience and cumulative expertise would be detrimental to the future of forensic research in the UK. Acquiring such expertise takes years; building a new team of critical mass would require a large investment by the taxpayer to recover the significant knowledge gap.

In the event of closure of the FSS, we would support the development of a properly funded national centre to host research and training facilities, hold reference data, and provide a quality assurance service and troubleshooting capabilities for all UK forensic laboratories. We would expect the national centre to have a close affiliation with the Forensic Science Regulator, providing a focal point for standards development, technical advice and practical scientific support. Such a centre may also include the responsibility for development and maintenance of national forensic databases, provision of niche capabilities, a major incidents capacity including counter terrorism work, and provide international consultancy on behalf of the UK. It is imperative that the staff of any such centre work closely with forensic practitioners to ensure the correct focus of their research.

The cost of forensic research to bring innovation into practice is small in comparison to the funding available for general academic research. However, if the UK is not to fall behind in the forensic science field, there is an absolute requirement for focussed spend on research. Such funding should address both the needs of the academic groups who perform the open-minded thinking and define the principles of novel techniques, and the development of these techniques into robust methods which are able to withstand the rigours of our adversarial judicial process.

In 2009–2010 FSS R&D cost c. £4 million to successfully operate. This cost might be mitigated through research grants and by providing services to FSPs in the UK and internationally, and delivery of niche casework.
AN OVERVIEW OF OUR ARCHIVES

INTRODUCTION

The FSS National Archive (FSSNA) physically comprises:
— Two secure warehouses in the Midlands.
— Three local secure archives contained within the facilities of the FSS Wetherby, Huntingdon and London sites.

It was estimated that in April 2008 the non-staff running cost of storage, within the FSS, was in excess of £445,000 per annum. This is an overhead which other forensic providers do not have to bear. It is understood that their general practice is to return all items and the majority of materials generated to the originating police force.

CONTENTS OF THE FSSNA

The FSSNA contains three broad categories of materials, interlinked with one another:
— Records of the receipt of cases into the FSS.
— Case files and associated paperwork.
— Retained materials.

Records of the receipt of cases into the FSS

The FSS possesses vital records which document the receipt of cases into the FSS—some dating back to the 1940s and 50s—up to the present day. On receipt at the FSS each case has always been allocated a unique reference number, and the file and any materials are subsequently archived according to this FSS reference number on completion of the work (rather than by police force, complainant’s name, force’s reference number, etc.).

These records are in the form of handwritten “booking-in” ledgers (up to approximately 1986–87), and then are mostly contained within historic computer systems. Other detailed index systems have also been retained, all of which may assist in the identification of particular records.

Many forces simply do not have such records and rely entirely upon the FSS to provide them with information in various circumstances. Indeed, many police forces did not computerise their crime recording systems until after 1994 and access to crime records prior to this computerisation is problematical for them. Examples of requests of this nature from the FSSNA include:
— Lists of cases submitted for a particular year relating to a particular offence type (eg for the purpose of carrying large-scale cold case reviews).
— “Cold matches” from the National DNA Database (A “cold” match is where a crime stain loaded many months or even years previously matches a newly loaded sample eg a rape loaded in 1998 may match a newly loaded PACE ref). Many forces do not retain any records at all relating to historic cases and rely on the information contained within the FSS case file to progress new lines of enquiry.
— Due to the publicity surrounding the success of cold case reviews victims of historic offences themselves have been known to contact forces directly to ask whether their case can be re-investigated. The police invariably contact the FSS to assist in locating the relevant case.

Similarly, the FSS has worked closely with the Criminal Cases Review Commission (CCRC) in their investigations, and with others, in relation to post-conviction enquiries.

Case files and Associated Paperwork

It has previously been estimated that the FSS main archive holds the records of over 1.5 million cases. However, taking into account the case records of the laboratories which have recently closed, together with those that exist at present, the total number of case files within the FSS as a whole is estimated to be 1.78 million.

These records comprise original case files and microfilm copies, and contain details such as:
— Police submission forms.
— Victim and other statements.
— Photographs.
— Continuity records.
— Examination notes.

48 Retained Casework Material: Estimation of FSS costs, Chris Curry, 23 April 2008
49 These are samples taken from persons arrested by the police
— Statements/reports from the scientist(s).
— Correspondence (with police, CPS, defence etc).
— Records of conversations.
— DNA match reports.

Other paperwork associated with casework, and vital in terms of locating the correct material for further processing, include blood grouping records and DNA folders containing record sheets with reference numbers; batch details; DNA analysis outputs; gel records; electronic DNA data.

In addition the FSSNA also retains DNA PACE samples and their documentation. These run into the millions and the police are charged for this service.

**Retained Materials**

The amount of material retained in any particular case varies widely; it should be noted that for the majority of historic cases the FSSNA holds general information on what is retained in each case rather than precise detail. Some materials are retained at room temperature whereas others (eg DNA extracts) are stored frozen.

The large majority of retained materials comprise the “by-products” of the original examination of the exhibits (rather than the exhibits themselves) and can include:

— Microscope slides (may contain semen, hairs, fibres, and all are potential sources of DNA).
— Tape lifts (originally taken to examine for a cross-transfer of fibres; however, they are also excellent sources of DNA as material, such as blood and semen, is lifted onto tapings in addition to fibres).
— Packets of debris recovered from surfaces (eg clothing—may contain skin flakes etc).
— Recovered hairs.
— Small cut out pieces of fabric bearing various body fluids.
— Various DNA extracts from approximately 1987 onwards (these are the remains of historic DNA tests).

Very occasionally the FSSNA has been found to have retained original exhibits; where this is the case it is nearly always such items as intimate swabs or blood samples.

The retrieval of case files and retained materials from the FSSNA can be complex, and requires detailed knowledge of FSS historic examination procedures (especially DNA) and idiomatic shorthand in order to correctly identify the requested file and/or material. There are many historical reasons for this complexity based around the various numbering systems that developed over the years. For example, many years ago some of the laboratories did not have DNA facilities. Thus, part of a case booked in at one site may have transferred to another FSS site and allocated a different (but cross-referenced) number.

In addition, historic DNA profiling was undertaken using a “batch” system, whereby a number of samples from different cases would be analysed in the same batch with one set of controls. If new work is requested on one of these historic samples it is necessary to also test a sample from the control on the plate.

**Requests for Archive Material**

Recent data indicates that there are approximately 19,000 requests made of the FSSNA per year. This figure does not include requests made of the three local FSS archives and thus the true figure is likely to be substantially higher.

Requests for case files, information, paperwork or retained materials from the FSSNA tend to fall into the following categories:

— Retrieval of case files in more recent cases in order for a scientist to attend court to give evidence.
— Retrieval of case files and materials in more recent cases in order for an independent scientist to examine the evidence on behalf of the defence.
— “Cold matches” obtained via the National DNA Database. As previously explained these occur when a crime stain loaded many months or years ago matches a newly loaded profile. This obviously provides a new avenue of investigation for the police, and in turn may require further scientific work. From experience, it is not at all unusual for the police to no longer have their paperwork and to turn to the FSS for assistance.
— Cold case reviews—these can vary from a request for just the case file to a complete retrieval of all items held by the FSS. Currently, the FSS is actively examining approximately 600 cold case reviews, and there are thousands in the pipeline due to ongoing large-scale projects run by forces. It is not unusual for other forensic service providers to request materials and files via police forces.
— CCRC requests—please see Select Committee FSS statement no.83 from the CCRC—and post-conviction review requests.
With reference to cold cases, the FSS case files contain a wealth of written material which, on most occasions, allows police forces to reconstruct cases. Not only are the circumstances of the case outlined but also other documentation is included such as: victim and suspect statements, doctors’ reports, conversations with investigators. For older cases it is rare for the police to have retained such information. In addition, the continuity and integrity of the exhibits is documented.

Occasionally huge numbers of requests are made in relation to national projects, for example:

— Operation Advance 1 to 3. Home Office sponsored project to target historic DNA samples in serious cases (23% match rate on the NDNAD from the 525 cases processed). Operation Advance 1 revealed that in 60% of cases identified by the FSS the police had no record of the offence, let alone any evidence.

— Operation Stealth 1 and 2. A similar project targeting undetected homicides.

— NPIA project to upgrade serious crime stains on the NDNAD from SGM to SGM+.

The movement of case files and retained materials to and from the FSSNA is recorded by all parties to maintain its continuity. An item which loses its continuity loses its credibility should it proceed to court; the burden of proof remaining with the Crown.

**Ownership of FSSNA Material**

Material in the FSSNA is retained under the terms of a Memorandum of Understanding between ACPO and the FSS or under previous retention policies; it is held on behalf of the police and the prosecuting authorities (The Crown and CPS). It should however be noted that the FSS owns some of the intellectual property within the files.

**Future Options**

The FSSNA is a truly remarkable, but complex, archive. It would be highly problematic, impractical and very expensive to attempt to return relevant materials and files to forces for a number of reasons such as:

— Files are archived according to their FSS case reference number, and not by police force.

— Many of the retained materials tend to be stored according to their “type” but with reference to their FSS case reference numbers eg all the slides from one lab are in one place in the archive, all the DNA extracts somewhere else, etc.

— Each batch of DNA extracts in some of the historic DNA processes comprises samples from different cases but with one set of batch controls. This point alone renders it impossible to split up and return such extracts to relevant forces, as any re-testing of samples must include the re-testing of the control; this control extract simply cannot be split into portions. There are many hundreds of thousands of historic DNA extracts that fall into this category.

— Every single piece of retained material would have to be sealed and documented for continuity purposes—there are many millions of these. If this movement is not documented then there is a huge risk to the integrity of the samples, and for any future potential work to be undertaken.

Other points to note:

— If the FSSNA were to be fragmented, it would become extremely difficult, if not impossible, to undertake any national projects to utilise future technological advances in forensic science.

— In addition, it could hinder any cross-border forensic enquiries.

— It is recognised that forces have a poor record of retaining anything other than undetected homicides and there is a danger that any material returned to them will ultimately be lost forever.

— If the FSS were to be sold off en masse to a private company it is difficult to predict what their reaction would be to the FSSNA. It might be viewed as either an unwanted overhead or a potential gold mine.

— If the FSS were to be broken up and the FSSNA sold, as a separate entity, to a private company then they would presumably view it as a potential source of profit.

— However, with either of the two options above, the police and prosecuting authority’s reaction to a private company holding their property is something they would need to comment upon.

A further approach, and the most logical, would be to retain the unique FSS National Archive as a national resource, funded by the Home Office. This resource would need to be strictly controlled and safeguarded. In addition to retaining case files and materials, the archive must retain the ability to search/data mine historic records in order to locate relevant files—for court or review—or produce case lists for forces. It would also be advantageous to retain some FSS staff, who understand the historical examination and numbering processes, alongside this facility.
AN OVERVIEW OF COMPLEX CASE WORK

SUMMARY

1. In this submission, the Forensic Science Service is addressing the quality of provision of coherent pre-examination decision-making and post examination interpretation in complex cases such as murders and serial cases of rape or armed robbery.

2. This does not include the provision of analytical test results themselves but the framework in which those tests are selected and the use made of their results; that is, how to make decisions about the most pertinent choice of item from those recovered for examination and the most useful and effective test type for analysis. The aim is to show how these will provide:

   (a) The best route for an investigation in the early stages of a case.

   (b) The most relevant and meaningful interpretation of the individual and combined analytical test results in the specific context of that case.

3. This competence can only be gained by experience. This cannot be gained in a small analytical or specialist laboratory as it requires a critical mass of scientific expertise and exposure to a wide range of forensic knowledge to develop the competence. This type of case-specific interpretation and evaluation is not a laboratory technique of the kind that would be suitable for external assessment to standards such as ISO 17025. These standards deal with the existence of and adherence to formal processes for analysis, but the case-specific interpretation of analytical findings is more difficult to quantify.

DISCUSSION

4. There is a distinction here between fragmentation of the supply of analytical tests, and of the interpretation of scientific findings within a major case. In any major case where multiple strands of scientific work are carried out, there is a degree of fragmentation, either between scientists examining different evidence types within an organisation, forensic science providers (FSPs), police laboratories, or other experts employed for specialist knowledge. However, these results require “knitting together” so that a coherent and comprehensive interpretation of the analytical results can be carried out in light of the specific case circumstances. It is the fragmentation of this part of the process that adds risk to the investigation and prosecution of cases. The analytical tests provide results that are useful only when an expert provides their interpretation within the context of the case.

5. The risks to an investigation are that scientific evidence may be missed or undervalued because of decisions made to limit what is submitted to the lab, or due to a lack of knowledge about what analyses are possible. As a result, the significance of a scientific finding in the context of the case may be missed. This can have the unintended consequence that the correct investigative strategy is not realised and an opportunity to either arrest or clear a suspect is missed.

6. The risks to the CPS are present both at the decision to charge and during the trial. If potentially useful tests are not requested, then there may be insufficient evidence for charging decisions. At trial, the significance of scientific findings may be missed because each analytical test is considered individually and no evaluation of the combined scientific findings is made. This may mean that a defence scenario is not evaluated when it is, in fact, true, potentially leading to wrongful conviction or exoneration. Alternatively the evaluation may be requested at such a late stage of the criminal process, eg during the trial, that it leads to an unchecked (not peer reviewed) opinion being provided by the expert during their oral evidence. In the past, this has led to repeated appeals and retrials, or the delay of a trial so that expert opinion and interpretation can be sought.

7. There are many examples of good practice where police, FSPs and individual experts have worked closely together. However, there is a danger that the procurement framework drives the commoditisation of forensic science down purely to a number of analytical tests, with a restricted approach where the FSP is authorised to “only do the work specified”. It is not this fragmentation which is the issue, but the lack of scientific input to the overall forensic strategy and to the interpretation of the over-arching scientific findings set against the context of the case.

8. The importance of this strategy comes at two points during the forensic process:

   (a) The selection of items and evidence types to examine, based on a scientific assessment of their likely usefulness to the investigation and prosecution of the case;

   (b) The assessment of the outcomes of the combined scientific findings and analytical test results in order to put this interpretation into the context of the case circumstances.

9. Some examples can be used to demonstrate this:

   (a) In an assault where there is an allegation that someone has been kicked, the police laboratory screens the items by examining the clothing for the presence of blood, then make decisions on which item to submit for analysis. Often a decision is made based on the most suitable bloodstain for obtaining a DNA profile, so one shoe would be submitted, for example. However, this does not provide the whole
picture, just giving information on the potential source of the blood as opposed to how the blood got there.

In a recent murder where a man was kicked and stabbed, the police laboratory pre-screened items and selected those that appeared to be suitable for DNA analysis. At court, the jury was unable to reach a verdict on the charges for some defendants. The entire case was then submitted to the FSS and re-examination showed the presence of sprays of tiny blood stains on trainers and lower trouser legs. The distribution of this staining allowed assessment of activity—this is the type of blood distribution you might expect to find as a result of kicking someone repeatedly—whereas just cutting out a stain for DNA analysis could not. At the second trial this additional examination and interpretation was helpful to the court and also affected the sentencing of this defendant. In this case therefore, the steps originally taken by the police in an attempt to keep costs down actually resulted in an increased cost to the CJS.

In another case where assault was alleged, much of the clothing was examined by the police laboratory, but the black items (which are more difficult and time-consuming to examine) were sent to FSS. The examination of items carried out by the police was aimed at cutting out bloodstains for DNA analysis, ie to confirm the source of the blood, whereas the FSS examined the black clothing for the distribution of blood stains, ie to find how the blood was deposited. At court, the two scientists were questioned about the activity that resulted in the blood being deposited on the clothing. The police laboratory scientists were not qualified to address this, as it is a complex interpretation outside the scope of their competence. The FSS scientist was asked the same questions regarding the pale coloured clothing but was unable to assist the court further because he had not seen the clothing before the stains were cut out for analysis. The police laboratory notes had not been made with this interpretation in mind either, so the information needed for this type of interpretation to be considered at a later stage had not been recorded. This resulted in the court being unable to hear evidence that would have been relevant to the jury’s decision.

**TRAINING AND EXPERIENCE**

10. This type of experience has to be gained through working in a close collegiate environment with fellow scientists where knowledge transfer and continuing professional development are encouraged rather than just being taught. Training of new graduates is staged so that they can provide expert opinion on less complicated cases within one to two years of employment. However, it is widely accepted forensic practice that it takes more than five years before a scientist is competent to begin dealing with forensic strategy setting, examination selection and evaluation of more complex cases, and even longer before they can become the lead scientist on major cases.

11. In a small forensic laboratory, especially one that sees a restricted range of casework and evidence types, the framework for gaining suitable experience would not be there. Although a scientist might be technically very competent, it would be difficult for them to gain the exposure to other experts and to suitable cases. Such cases would encompass a wide range of issues required to develop a rounded forensic scientific competency. This would cover the selection of items and evidence types to examine, based on a scientific assessment of their likely usefulness to the investigation and prosecution of the case. It would also require significant experience in the assessment of the outcomes of the combined scientific findings and analytical test results, so that this interpretation can be put into the context of the case circumstances.

**CONCLUSION**

12. Suggestions for a way forward include:

(a) Training of those involved in the CJS—covering Judges, CPS, police, scientists and scene examiners in the two areas of selection and interpretation as described above.

(b) Reduction in fragmentation to enable the optimum interpretation and achieve value for money throughout entire CJS.

(c) Enhanced communication within the supply chain, to enable the most effective forensic strategy to be utilised in the context of the investigative need.

(d) Research and dissemination of the latest interpretation and evaluation techniques and philosophies between forensic scientists to ensure that this knowledge is shared.

Please note the FSS has historically delivered training to the Judiciary.
Further supplementary evidence submitted by the Forensic Science Service (FSS 87d)

Q. Further to the Committee’s evidence session yesterday, is the FSS is still taking on new cases/work. If so, what kind of work is it, ie short term work that will be completed by 2012 or long term work that will need to be transferred to other providers?

We are still taking cases but an end date for submissions has now been agreed, for early October.

Casework of all types will be taken on as normal up until 3 October. This date was chosen as it is believed that this will give us enough time to complete the cases we have in hand by March 2012. Should a major and lengthy investigation come in, all submissions received would be completed and reports written by March, ready for case files to be handed over to a new provider. If by any remote chance that major investigation occurs close to the cusp, then the files would be handed to the new provider and they would undertake any further work coming in on that particular case from the point of handover.

Kay Francis
Director of Communications
Forensic Science Service Ltd
3 May 2011

Written evidence submitted by the Crown Prosecution Service (FSS 89)

Q1. What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

1. The FSS have historically been the principal providers of research, development and training activity in the area of forensic science. Since December 2005 other forensic science providers such as LGC and Orchid Cellmark have also provided local and or niche training. In recent times the FSS has provided ad hoc niche (eg fingerprint awareness) training to a small number of CPS lawyers.

2. The review of Research and Development in Forensic Science announced on 27 January 2011 and to be led by the Home Office Chief Forensic Scientist, assisted by the Forensic Regulator, will need to address these issues. The CPS has been invited to work with the Regulator in this review.

Q2. What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

3. Forensic science plays an important part in the investigation and prosecution of an increasing number of criminal offences. It is used from the very outset of an investigation at a crime scene through to the evidence relied upon in a criminal trial. Forensic evidence can be crucial in a wide range of cases ranging from the analysis of the blood of a motorist suspected of driving whilst under the influence of drink or drugs, through to serial murders and rapes.

4. The most commonly used forensic evidence includes the analysis of:  
   — DNA;  
   — Drugs;  
   — Firearms and ammunition;  
   — Fibres;  
   — Mobile phone usage;  
   — Documents;  
   — Glass and paint; and  
   — Footwear patterns.

5. Whilst the Police initially commission forensic analysis, the prosecutor may require additional work to be carried out either in strengthening the case against a suspect or as a result of issues raised by an expert instructed by the defence. The prosecution will also have direct involvement in arranging conferences with or between the expert witnesses as well as securing the attendance of the witness at court.

6. Forensic evidence can bring huge benefits to the criminal justice system by narrowing the issues to be tried in a case or encouraging an early guilty plea. It is, however, imperative that the highest possible standards are maintained by the suppliers of forensic services including proper resourcing, training, equipment, processes and integrity benchmarks such as accreditation. Unless these standards are followed, those guilty of crime may escape justice or innocent persons could be convicted.

7. The impact of the closure of the FSS upon the criminal justice system will initially depend upon:  
   — The national contractual provisions which apply in this event.  
   — The proportion and type of forensic work that each police force provides to the FSS.
— The contingency plans (if any) that each police force has for an alternative means of supply of each of the disciplines within the arena of forensic services.

8. These are all matters which are being considered by the Forensics Transition Board which has been established by the Home Office and which is meeting regularly. The Board has representation from the Home Office, ACPO, NPIA, APA, MOJ and CPS. The Forensic Regulator also sits on the Board. More recently, external advisors from Price Waterhouse Cooper have been employed and will assist the Board especially on the complex matters regarding company law, procurement and finances.

9. Against the background of the contractual impacts referred to above, the following issues which are relevant to criminal prosecutions, both current and in the future, will also need to be addressed:
— continuity, storage of and access to forensic exhibits, samples and records;
— the need for expert witness statements regarding those exhibits;
— attendance of experts formerly employed by the FSS at court, the potential for delays to be caused to trials, and negotiation of the fees in such cases;
— proactive case management under the Criminal Procedure Rules including the identification of issues;
— continued laboratory functioning at the FSS to preserve the integrity of exhibits etc;
— the impact on other stakeholders, such as defence practitioners, who also use the services of the FSS;
— UKAS ISO accreditation which is required by the Courts. The FSS could lose accreditation and other suppliers may not have it for many forensic disciplines;
— maintenance of the databases held by the FSS to ensure their reliability and integrity; and
— FSS scientists setting up in practice, providing services to the defence which could jeopardise the efficient and effective disposal of cases.

10. In relation to the transfer of forensic work from the FSS to the other private sector providers, it is very important that the providers understand and have evidential discipline in relation to the particular requirements of criminal prosecutions. This relates not only to evidential requirements such as ensuring the continuity and integrity of exhibits, but also the fundamental requirements of the criminal disclosure regime and the duties of an expert witness. The providers will also need to ensure that any new techniques are properly assessed and subject to proper safeguards so that their introduction supports the effective working of the criminal justice system.

Q3. What is the financial position of the Forensic Science Service?
11. This is not a matter upon which we can comment.

Q4. What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?
12. In order to work effectively with a wider range of suppliers to the market, there would need to be a clear and accessible ‘gateway’ to enable the CPS (and indeed other prosecuting agencies) to engage and communicate consistently on a national basis.

13. It is important to recognise that, unlike investigation and law enforcement authorities, the CPS does not have a contractual relationship with any forensic science supplier. Consideration will need to be given to how providers can be held to account if they fail to deliver or fail to adhere to appropriate quality assurance provisions in relation to evidential integrity and expert witness training.

14. It will also be necessary to consider the impact upon the adversarial nature of the CJS when expert witnesses employed by private companies assert, for example, that the methodology of analysis used by his / her employer is superior to the methodology used by a competitor’s expert witness (for the other side). Both disclosure and cross-examination in such cases can be hampered or even impeded by a refusal to disclose the detail of the different methodologies on the basis of commercial sensitivity. The CJS has already some experience of this in the DNA analysis arena.

15. The issue is not however only one of commercialism and capacity. None of the suppliers are United Kingdom Accreditation Service (UKAS) ISO accredited in all forensic disciplines, and thus can only take on a limited range of forensic work. The suppliers would need to work towards accreditation in new disciplines to take on some of the current work carried out by the FSS. By way of example, the FSS are thought to be currently the only supplier offering a Crime Scene Investigator service as well as certain specialised drugs analyses. Gaining accreditation in these fields is a time consuming and potentially expensive process and the appetite of the suppliers to undertake this exercise is not yet known. Having said that, it is understood that the UK has committed to full accreditation of such services by 2015 (via the Forensic Science Regulator).
Q5. What are the alternatives to winding-down the Forensic Science Service?

16. We are unable to comment on any possible alternatives. However, it is important from a criminal justice perspective that the transition is managed to allow time for the issues mentioned above to be resolved. This will:
   — allow an alternative viable and sustainable market for forensic services to be introduced;
   — protect existing criminal cases;
   — ensure continuity of service for future cases;
   — minimise the risk of adverse outcomes in criminal cases;
   — ensure the quality control of forensic services; and
   — maintain public confidence in both forensic technology and the criminal justice system.

Q6. So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

17. We are not able to comment in detail on this question. The Forensics Transition Board should be an effective method of ensuring a controlled transfer of forensic services to other suppliers.

Crown Prosecution Service

February 2011

Written evidence submitted by Gary Pugh (FSS 90)

Declaration

1. This evidence is provided to the House of Commons Science and Technology Committee inquiry into the winding-down of the Forensic Science Service (FSS) by Gary Pugh who holds the following positions:
   Director of Forensic Services in the Metropolitan Police Service (MPS); responsible for the effective provision of forensic services to crime investigation in the MPS including work carried out under contract by the FSS.
   Chair of the National DNA Database Strategy Board; as the ACPO nominee responsible for the oversight of the operation of the National DNA Database and Data Controller in common with Chief Officers.
   Chair of the Forensic Science Regulator Working on Group on Standards in Fingerprint Examination.

2. The views expressed are those of the author and not the views of agencies referred to above, notwithstanding his policy responsibilities within the MPS. The author provided a detailed submission to the Science and Technology Committee in October 2004 and gave oral evidence to the Committee.

3. The author has over 30 years experience in forensic science with roughly half as a practitioner and the other half as manager and leader. He was part of the team that set up the FSS as an Executive Agency in 1990–91 and in 1999 he was appointed a Director on the Executive and Main Boards of the FSS. He joined the MPS in May 2001. He currently sits as the MPS representative on the Home Office FSS Transition Board.

Response to the Questions Posed in the Terms of Reference

What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

4. I understand that the FSS currently undertakes around 60% of the forensic science examinations for the police forces in England and Wales. The MPS has a contract with the FSS which covers the provision of all forensic science services in sexually motivated, violent and organised crime, and half of the homicides investigations undertaken by the MPS. The FSS also provides services in volume crime and collision investigation. The analysis of drugs under the Misuse of Drugs legislation and bulk DNA profiling of samples taken from arrestees and recovered from crime scenes is undertaken by LGC Forensics.

5. The impact of the closure of the FSS will mean the MPS will need to find alternative provision of around 80% of its current forensic science requirement based on current levels of spend. Forensic science cannot stop, nor can there be a major discontinuity in supply which adversely impacts on the administration of justice and the confidence of victims or the general public. Within its current contracts the MPS moved around half of its forensic science work in homicide investigation from the FSS to another forensic science provider over a period of three years. This was done in a gradual and managed way to ensure the needs of investigators and the courts were met. To remove the FSS as a provider of forensic science services in twelve months will be an operational challenge of unprecedented magnitude. Based on 2009–10 levels and taking into account work already contracted to other forensic science providers this leaves the need for capacity to undertake forensic examinations in around 300 suspicious death investigations, 1,500 rape and sexually motivated crime case and 1,500 crimes of serious violence while also picking up a large legacy of cases.
6. The MPS has given careful consideration as to the most effective way to deliver forensic science services consequent on the Home Secretary’s announcement and the timescales that have been set for the wind down of the FSS. The MPS had its own world renowned forensic science laboratory which opened in 1935 and following a decision by the then Home Secretary was merged with the FSS to form a “national” forensic science service in 1996. Prior to the formation of the FSS the Metropolitan Police Forensic Science Laboratory (MPFSL) was the largest forensic science laboratory in the UK.

7. Since the MPFSL merged with the FSS there have been significant changes in forensic science most dramatically the growth of DNA profiling in crime investigation and the administration of justice. The MPS has invested in forensic science capability to maximise the effectiveness of DNA profiling and other developments in forensic science such as the Home Office funded National Ballistic Intelligence Service. It has also invested in the use of specialist evidence recovery and imaging services to rapidly retrieve and interpret evidence in suspicious death investigations. This is in response to the strategic shift in forensic science brought about by the growth of the national forensic databases of fingerprints and DNA that provide the means of rapidly identifying potential suspects and, the ability to inform decision making at the early stages of a criminal investigation. These developments contrast with the more traditional role of forensic science in providing corroborative expert evidence in court proceedings.

8. In addition to changes in technology the future operating model for delivery of forensic science services to the MPS will take into account significant changes in the criminal justice system, particularly effective case management as set out within the Criminal Procedure Rules. The MPS in collaboration with the London Criminal Justice Board and CPS are implementing an initiative called “Streamlined Forensic Reporting” (SFR) in which fundamental changes are made to the way forensic evidence is provided to the criminal justice system. Under this initiative an early indication is given to the defence of forensic evidence and its relevance and under case management principles issues are identified much earlier in the process. In the pilot of SFR on a limited range of forensic cases in two Boroughs in the MPS there was 80% guilty plea before trial and significant reductions in the amount of forensic evidence required.

9. Taking all these factors together and with the aim of providing cost effective and reliable forensic science services in the investigation of crime and to the courts the MPS is developing a new operating model where the recovery, interpretation and reporting of forensic evidence will be undertaken by the MPS and the DNA profiling and analytical science will be undertaken by commercial providers. This will allow for the rapid implementation of SFR within a wider case management framework and minimise the impact of the closure of the FSS by March 2012 on service continuity and quality.

10. On the future development of forensic science in the UK, the FSS has clearly made a critical contribution to the expansion and use of DNA profiling in crime investigation. However, it did this from a position of being the principal provider of forensic science services and endorsed as such by the government, it owned and managed the UK National DNA Database, set standards for forensic science in the UK and worked in close partnership with the Association of Chief Police Officers. The forensic landscape is now much more fragmented with little if any wider strategy or policy agreed by all the stakeholders for the future direction and capability building in forensic science in the UK.

What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

11. The Home Office Forensic Science Service and after 1991 the FSS have led the world in the development of quality systems in forensic science from the introduction of blind testing and Quality Assurance Processes in the 1980s to the introduction of a Quality Management System accredited to international standards such as ISO 9001 and ISO 17025. The FSS supported the introduction of registration and a Code of Practice for forensic practitioners. There is no reason to believe that the closure of the FSS will have any specific adverse effect on the future quality of forensic science work in the UK notwithstanding the need to maintain accreditation and ensure the motivation of the FSS staff during the wind down.

12. The current and future quality of forensic science is much strengthened by the introduction of a Forensic Science Regulator to oversee quality and set standards. The Regulator has produced a Code of Practice and engaged with a range of stakeholders, it will be critical to the maintenance of quality and standards in forensic science that the post becomes embedded and empowered to maintain and raise standards in forensic science in the UK. This could begin by formalising the role of the Regulator in monitoring and providing oversight of the quality of forensic science work undertaken by all forensic science providers and police forces during the transition to the closure of the FSS.
13. There is no reason to believe, or evidence to support a view, that the closure of the FSS will adversely affect the impartiality of forensic evidence used in the criminal justice system. It is suggested that “forensic science for profit” and the commercialising forensic science could undermine the impartiality of forensic evidence used on the other hand work undertaken by police forces would only consider a prosecution view. I have seen no evidence of either of these views, forensic practitioners wherever they work realise that, as the Criminal Procedure Rules set out, their overriding duty is to the courts. Again the safeguards for the impartiality of forensic science lie within the Regulator’s Codes of Practice and Conduct. The MPS has signed up to these and as well as achieving scientific accreditation to ISO 17025 it will introduce its own internal register of competent forensic practitioners who will work to the Regulator’s Code of Practice. The MPS is currently the only police force to achieve scientific accreditation to ISO 17025 and as part of achieving this it had to demonstrate that forensic staff who undertake work that falls within the scope of accreditation are impartial and objective in the opinions they provide to the courts.

What is the financial position of the Forensic Science Service?

14. The current financial position of the FSS is not an area I can comment on. However it is worth considering the context and history of the growth and development of the FSS from its formation as an Executive Agency in 1991. In the first annual report and accounts for the year 1991–92 the FSS had a total income of £20 million, in the 1994–95 the year before merger with the MPFSL it had an income of £31 million, after merger in 1997–98 this had grown to £51 million and in 2006–07 following the Home Office DNA Expansion Programme where successive governments invested in excess of £200 million over five years to expand the use of DNA profiling the FSS income peaked at £210 million.

15. The withdrawal of grant funding and building this funding into police budgets as part of the general settlement took away a degree of protection or ring fencing of this spend and opened it up to scrutiny alongside other funding priorities in policing.

What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

16. As referred to above and reflected in the growth in income of the FSS the forensic market has expanded significantly in line with the growth in use of DNA profiling. At least 60% of the MPS current spend on external forensic science services is DNA related. It is likely that the unit cost of DNA profiling will reduce with even the prospect of rapid DNA analysis being conducted on site through “lab on a chip” technologies which means that rather then laboratory based analysis it will possible for the police service and other law enforcement agencies to have DNA profiling undertaken in custody centres or at the crime scene.

17. The MPS has always recognised its position as the largest purchaser of forensic science services in England and Wales and the need to procure services within a broader framework that improves service delivery while not causing major shifts in demand. In 2002 the Metropolitan Police Authority agreed a commercial strategy for forensic science provision to the MPS which recognised this context, the need to improve service delivery and reduce costs. Our proposed new operating model described in paragraph 8 is an extension of this approach recognising the need to improve processes further through effective case management while seeking a solution that can be implemented by March 2012.

18. We need to learn from the wind down of the FSS and understand the long term viability of the commercial provision of forensic science services, given the fragmented and fragile nature of this market some degree of risk management is required to avoid a major failure in forensic science provision in England and Wales. This is reinforced by science and technology developments that have already occurred and will come to fruition in the near future. The ability to rapidly (c 10 minutes) produce a DNA profile from material at a crime scene set alongside the existing ability to scan, transmit and identify a latent finger mark at a crime scene and the ability to identify drugs of abuse with a hand held device in minutes signals the opportunity for “real time forensics”. In this model fingerprint bureau and forensic science laboratories could become obsolete and the current forensic science provider base would need to fundamental re-engineer their businesses developing new services and acquiring new skills and capabilities.

What are the alternatives to winding-down the Forensic Science Service?

19. Given the reported adverse commercial position of the FSS, the public sector financial constraints and over-capacity in the market it is very difficult to see how any alternative to the FSS ceasing to be a commercial entity in its current form. The wind down of the FSS does offer an opportunity to increase the demand available to other commercial forensic providers to reassure their shareholders and investors. The only other option would be to take the FSS back into public ownership and establish a state run forensic science services, this would probably precipitate a withdrawal of the commercial sector and a return to a pre-1991 position. England and Wales are the only countries in the world with fully commercial provision of forensic science services. In my view the current situation would not justify a change on this scale unless there was a withdrawal by one of the existing major commercial providers of forensic science.
So far as they are known, are the arrangements for closing down the Forensic Science Service, making staff redundant and selling its assets adequate?

21. I am member of the Home Office FSS Transition Board Chaired by Stephen Webb. A considerable of work is being undertaken by ACPO, the NPIA, FSS and Home Office to ensure the smooth wind down of the FSS and putting in place alternative arrangements for provision for forensic science. The Home Office are best placed to give a view as to the overall adequacy of these plans and the operational risks involved. The MPS stands ready to implement its new operating model and actively contribute to smoothly managing the wind down of the FSS with the overriding objective of ensuring continuity and quality of forensic science service provision.

Gary Pugh
Director Forensic Services
Metropolitan Police Service

February 2011

Written evidence submitted by the University of Strathclyde (FSS 91)

What will be the impact of the closure of the Forensic Science Service on forensic science and on the future development of forensic science in the UK?

1. Historic development of the FSS

The Forensic Science Service (FSS) has been central to virtually all of the major developments in UK forensic science for over the past 50 years and deserves the recognition for pioneering many techniques, particularly DNA profiling. Many of these developments were also of international significance. However this must be set in context. For most of their history, the FSS were either the only strategic provider of forensic science services in England and Wales or had a virtual monopoly position in forensic science activities. This position was until recently supported by the police service and the Home Office. From this privileged position they had access to information and opportunities not available to other providers. Furthermore the FSS were major financial beneficiaries of the DNA expansion program. This funding ultimately led to what could be described as “hyper-inflation” in forensic activities (by laboratories and police forces) and such activity inevitably had to reduce at some time. Despite the amount of funds injected (£300 million) into the forensic market by the DNA expansion fund no systematic analysis of the value of this investment has been made nor was there to my knowledge, any effective modelling or consideration of an “exit strategy” when activities levelled out or decreased. Failure to plan for this may be one of the contributory factors in the current position of the FSS. However, there are many other interacting factors such as how the police structured their procurement, developments in the private forensic science market and the international financial crisis, and it would probably be impossible to disentangle the individual impact of these factors.

2. Effect on research

Notwithstanding the comments about the FSS contribution to research above, it is difficult to convey the lamentable state of research in forensic science compared to other scientific disciplines. An informal survey of research outputs carried out by the University of Strathclyde in 2008 showed that at that time the FSS were the largest publisher of peer reviewed research with around 127 publications in the previous decade. To set this context, the Chemistry Department of the University of Strathclyde published almost the same number (124) of peer reviewed publications in 2007. In other words, the output of the most productive research organisation in the UK, over a 10 year period, equated to a single department in a single university in a single year. This survey also looked at 35 universities that teach forensic science and showed that almost half of them had never published a single peer reviewed paper during the period surveyed and the average rate of publication was two papers per decade. Whilst publications are only one aspect of research and there are other indicators that could be used, this information is sufficient to identify the dramatic differences between research in the forensic world compared to the general scientific world. Virtually none of the current research councils in the UK supports forensic science research. A notable change has recently taken place in the USA where a landmark report by the National Academy of Sciences has identified this issue and its impact on crime investigation and criminal justice. This has resulted in major political attention and dedicated funding for research.

In addition to funding, a systematic and effective research programme in forensic science will require the closely structured and mature collaboration between academic institutions, forensic science providers, the police service and others in the criminal justice system. This situation does not exist at present in England and Wales. Academic institutions cannot be engaged due to lack of funding and neither the forensic science providers nor the police service have demonstrated sufficient understanding of research programmes of this type.

It is difficult to imagine that the research situation will be improved by the loss of the FSS or their replacement by a privatised organisation. Without funding sources and effective collaborations with academic institutions it seems likely that future research in a private market will focus on short term economic benefits for the individual companies.
3. Future impact of closure

During the past 20 years there have been many technological developments in forensic science as well as structural changes to the industry and new legislation. This makes it extremely difficult to predict the impact of this closure. Nevertheless most forensic scientists believe (as I do) that the winding down of the FSS is an undesirable outcome that will impact adversely on criminal justice. Some of the undesirable issues that may arise include:

- Fragmentation of evidence when multiple providers are used
- Poorer communication between users and providers
- Less information sharing between providers and the police service
- Less development of effective working practices

What will be the implications of the closure on the quality and impartiality of forensic evidence used in the criminal justice system?

4. There is open discussion about police service intentions to carry out more forensic testing in house although direct evidence of the true extent of this is difficult to obtain. Where this work is carried out under the appropriate international standards, by competent staff, in police organisations that understand scientific standards, there should be no significant implications for criminal justice. If appropriate standards are not used for in house examinations by police forces this would result in a two tier system of standards that would not be in the interests of justice and unfair to forensic science providers. It should also be noted that one of the main reasons for the introduction of formal quality standards in forensic science was high profile miscarriages of justice. Were “in-sourcing” to take place without the implementation of formal quality standards I would have serious concerns about the implications of this. Furthermore, it is not a trivial matter for the police service to manage scientific standards. Unlike, for example, the health sector who have a scientific knowledge base and relevant skills, the police lack the core knowledge in science. Although there may be individuals in the police service who are scientifically qualified, there are very few practicing professional scientists.

What is the state of, and prospects for, the forensics market in the UK, specifically whether the private sector can carry out the work currently done by the Forensic Science Service and the volume and nature of the forensic work carried out by police forces?

5. The market appears to be extremely fragile, uncertain and immature. It is essential that strategic capacity and a capability to provide forensic services are maintained but it is unclear at this stage how this is to be established. The significance of a wholly privatized forensic market for criminal justice and how this will develop in economic and scientific terms is impossible to predict. The MacFarlane report\(^2\), which recommended privatisation of the FSS stated:

“The Review recommends this it would be in the interests of the Criminal Justice System for the FSS to become private sector classified. We further recommend that a programme of work be carried out to ensure that this is undertaken in the most appropriate manner, safeguarding the needs of the public sector customers.”

The programme of work referred to was presumably to “manage” the FSS into the private sector and this has either not been implemented or failed. I do not believe that one can legitimately object to privatisation in principle since private provision of services exists in many other areas of society, including the criminal justice system. Furthermore the main private forensic science providers appear to have served the needs of the CJS to date. There also appear to have been valuable benefits that have been forthcoming in England and Wales, such as very fast turnaround times for products and services. This contrasts with most public sector laboratories around the world that have very large backlogs.

I would consider it essential that a wholly privatised forensic science market was effectively regulated. The remit of the Forensic Science Regulator is confined to quality standards and a great deal of positive work has been done here. Quality standards are essential to maintain the integrity of forensic work for the criminal justice system they are not sufficient on their own. In a wholly private market, it is likely that the development of new products and services will be focussed on competitive advantage as is legitimate for any private enterprise. However, competitive advantage and benefits to the criminal justice system will not always go hand in hand. There are analogies with the pharmaceutical industry in that a significant proportion of new drugs developed have very limited therapeutic benefit. Furthermore, users of such products are likely to be subject to contradictory marketing material which will make it difficult to establish true benefits. Another important aspect of this is how the police use forensic science. There have been many reports\(^3, 4\) over the past 30 years that show that the police service does not use forensic science particularly well and that with certain exceptions (e.g. Senior Investigating Officers, Senior Crime Scene Managers) knowledge of forensic science within the police service is poor. Given these issues, I believe that regulation must extend to how products are marketed, including accuracy and transparency of technical specification and fitness for purpose.
What are the alternatives to winding-down the Forensic Science Service?

6. The FSS has gradually developed over the past two decades from traditional public sector organisation, then as a government agency to their current position. They have been subject to many reviews primarily to deal with constantly increasing demands of the police and the courts but also to improve how their services were provided. In their original form as a public sector organisation their users could make virtually any demand they wished with little responsibility for the consequences of this in organisational terms. More recently, as a government agency they were in a better position to control their workload and demands by charging for services and this led to very significant improvements. I have observed this process from a number of standpoints, as a practising forensic scientist, as a senior manager in the police service (as a purchaser of forensic science) and in my current position. The direct link between charging and service provision compels dialogue and keep in check the previous poor practice by the police and forensic science providers. At its best it results in a mature collaborative approach between investigators and scientists that clarifies priorities, desired outcomes and manages risk. In my view this strikes the best balance the relationship between the police as investigators and scientists as independent experts.

This question of what alternatives to privatisation of the FSS are possible is a complex one that contains elements outside my area of expertise. Whilst I am not in a position to provide an alternative solution I can describe some of the characteristics that any alternative must take into account as well as areas that are essential to be managed or avoided. Any future configuration for the FSS and the private market as a whole must in my view:

- Fundamentally serve the interests of justice in providing independent and objective evidence.
- Maintain a scope and service provision that is fit for purpose.
- Engender an effective, mature business like relationship between providers and users. (This relationship has deteriorated in recent years).
- Be fair to all providers of forensic science.
- Support the collaborative development of forensic science practices at a between providers, the police service and other criminal justice stakeholders.
- Address the major deficit in research and knowledge exchange in forensic science.

Outcomes that need be avoided include any that might lead to:

- Consumer driven or exclusively financially driven purchases of forensic science services by users.
- Anti-competitive behaviour, cartels etc.
- The production of misleading information in communication or marketing, of costs, or potential benefits of services and products.

Professor Jim Fraser
Director, Centre for Forensic Science
University of Strathclyde
22 February 2011

REFERENCES


Written evidence submitted by the National Policing Improvement Agency (NPIA) (FSS 96)

In response the committee’s requests for information on police spend on forensics over the last five years, specifically in-house work a brief is provided here:

The Police’s expenditure on Forensics in the last five years, and the split between internal and external spend is given below. It can be seen that both internal and external forensic spends dropped in the last year. The reduction in the internal forensic spend will accelerate in 2010–11 and beyond. The reduction in external forensic spend is in no small part due to the introduction of competition into the forensic marketplace.

### Table 1

**FORENSIC SPEND IN ENGLAND AND WALES IN £ MILLIONS**

<table>
<thead>
<tr>
<th></th>
<th>Internal</th>
<th>%Internal</th>
<th>External</th>
<th>%External</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005–6</td>
<td>165</td>
<td>46.5%</td>
<td>190</td>
<td>53.5%</td>
<td>355</td>
</tr>
<tr>
<td>2006–7</td>
<td>170</td>
<td>47.2%</td>
<td>190</td>
<td>52.8%</td>
<td>360</td>
</tr>
<tr>
<td>2007–8</td>
<td>180</td>
<td>49.3%</td>
<td>185</td>
<td>50.7%</td>
<td>365</td>
</tr>
<tr>
<td>2008–9</td>
<td>190</td>
<td>52.1%</td>
<td>175</td>
<td>47.9%</td>
<td>365</td>
</tr>
<tr>
<td>2009–10</td>
<td>185</td>
<td>52.9%</td>
<td>165</td>
<td>47.1%</td>
<td>350</td>
</tr>
</tbody>
</table>

**GRAPH OF THE EXPENDITURE.**

Forensic Spend in England and Wales

The internal expenditure is primarily on pay for crime scene and fingerprint analysis (work not carried out in the private sector)

The external expenditure is split between commodity testing (DNA, Drugs and Toxicology) and casework.

Please note that the casework is likely to include some DNA analysis depending on the type of case to be examined.

**THE DROP IN EXTERNAL SPEND ON FORENSICS**

Although increased in-sourcing of forensic services is offered as a reason for the drop in external forensic spend, it is important to note the significance of the application of commercial tendering arrangements to forensic services making the service more effective buyers.

The NPIA has developed a National Forensic Framework Agreement which allows forces to tender their forensic services in a relatively simple way (when compared to full EU tendering process). This is being adopted nationally.

The East Midlands region were the latest region to put their entire forensic services out to tender under the NFFA agreement. This has resulted in an 18% reduction in their total cost of external forensics and the cost of drug analysis dropped by 40%.

When savings of this magnitude are compared to the fall in the value of the forensic marketplace, it can be seen that the introduction of competition into the forensic process is the single biggest factor in the reduction in forces external forensic spend.
In addition forces adopt practices where effective scientific capability allows disposal without the need for submission to external laboratories. For example recently the NPIA has been working with the service to deliver effective drug testing capability at custody suites thus enabling charging to occur on guilty pleas without the need to send samples off for unnecessary and costly laboratory testing.

*Dr Simon Bramble*
Head of Police Science and Forensics
Policing, Policy and Practice Directorate
National Policing Improvement Agency
25 March 2011

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**Supplementary evidence submitted by the Association of Chief Police Officers (ACPO) (FSS 99)**

I understand that the committee has requested information under the three headings below.

We have some but not all of the information sought. Under government policy to reduce central demands for data on forces, we are constrained to use existing data sources rather than carry out new data gathering exercises.

i) The total costs of internal forensic science, including a breakdown of expenditure on testing, capital (including refurbishing and developing labs), training, admin and any other costs.

The figures previously reported to the Committee for internal forensic science were:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost (in £ million)</th>
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<tbody>
<tr>
<td>2005-06</td>
<td>£165</td>
</tr>
<tr>
<td>2006-07</td>
<td>£170</td>
</tr>
<tr>
<td>2007-08</td>
<td>£180</td>
</tr>
<tr>
<td>2008-09</td>
<td>£190</td>
</tr>
<tr>
<td>2009-10</td>
<td>£185</td>
</tr>
</tbody>
</table>

For 2010-11, we have a figure of £181.2 million. This is an estimate produced by force finance departments in mid year as to what their internal forensic expenditure would be over the course of the whole year, which may be too high as it will not reflect in year cuts made in the latter part of the year. Force finance departments have not yet produced final figures for actual internal spend for 2010-11.

Unfortunately it has not been possible to obtain capital expenditure specifically for forensics for the period requested but we have been able to review such expenditure in West Midlands Police as a case example. Over the last three years there has been no capital expenditure in that force in the area of forensic science, following an earlier re-fit of the facility.

ii) An estimate of total costs of getting police forensic activities accredited to ISO17025, including associated capital expenditure.

The Police Service led by ACPO has a specific project supported by the NPIA to delivered fully accredited Fingerprint Enhancement Laboratories (FEL) by 2015. Work carried out by NPIA on the cost of getting these laboratories accredited to ISO 17025 estimated that there would be an initial cost of £2m with an annual maintenance cost (i.e. keeping documentation up to date, surveillance visits from UKAS, etc.) of £275K in total. It was recognised that this could only be very approximate. All forces have recently confirmed they are aware of the mandate to gain accreditation to ISO 17025 for their FEL by November 2015.

Forces are beginning to plan how other police forensic activities could be accredited to ISO 17025 but this work has not yet proceeded sufficiently far to enable an estimate of costs to be produced. Although the service is committed to achieving accreditation where the activity falls within the scope of the Forensic Science Regulator’s Quality Framework, it should be noted that currently the quantity and spread of such activity is very small. This was as noted by the PWC report, which said the large majority of the work done by forces and the private sector was complementary with very little overlap.

iii) The current level of police expenditure on external forensics for 2010/11 and most recent projections for 2011/12; for 2010/11 broken down by month as it has been suggested that there was a significant contraction in the external market in this period.

The data supplied to the committee already on external forensic spend shows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost (in £ million)</th>
</tr>
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<tbody>
<tr>
<td>2005-06</td>
<td>£190</td>
</tr>
<tr>
<td>2006-07</td>
<td>£190</td>
</tr>
<tr>
<td>2007-08</td>
<td>£185</td>
</tr>
<tr>
<td>2008-09</td>
<td>£175</td>
</tr>
<tr>
<td>2009-10</td>
<td>£165</td>
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</tbody>
</table>
For 2010–11, we have a figure of £140 million. This is an estimate produced by force finance departments in mid year as to what their external forensic expenditure would be over the course of the whole year, which may be too high as it will not reflect in year cuts made in the latter part of the year. A survey of force Scientific Support Departments carried out in late January 2011 indicated that they believed the actual spend for 2010–11 would be considerably less than £140m and that there would be a further substantial fall in 2011–12. Force finance departments have not yet produced final figures for actual external spend for 2010–11.

Chris Sims
Chief Constable
Association of Chief Police Officers

26 April 2011